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THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

Vol. XVIII. Chicago, Ill., January 3, 1882. No. 1.

TOPICS PRESENTED THIS WEEK.

Editorial—

Items 4, 15
Halleluja; 'Tis Done.................... 3
Scotch Heather.......................... 3
The Heather Bloom...................... 3
Planting for Honey...................... 4

Among Our Exchanges—

Progress................................ 4
Progress of Bee-Culture in England...... 4
Wasted Sweetness........................ 4
Odd-Sized Frames 5
Antiquity of the Bee.................... 5

Convention Notes—

Convention Directory.................... 5
Southeastern Michigan................... 5
Northeastern New York Convention 5
Notices 5

Correspondence—

Foundation for Sections 6
Beautiful Bees 7
Handling Bees Without Protection........ 7
Salicylic Acid and Foul Brood........... 8
Extracted Honey No. 1................... 8
Improvement of Bees..................... 9
Bee-Culture in Florida.................. 9
Notes from Western Missouri 10
Sweet Clover for Bottom Lands........... 10
The Apiary Register Book................ 10
Consumption of Honey in Winter.......... 10
Bee-Keeping in Kansas................... 11
Good Pasturage for Bees 11
Bee and Honey Shows 11
Purity of Honey Guaranteed 11

Selections from Our Letter Box—

Honey Pop-Corn Balls 12
Interested 12
A Correction 12
State Society for New Jersey. 12
Bees Wintering Well..................... 12
Bees on the Wing........................ 12
Mild Winter............................. 12
That Cough Medicine..................... 12
Extractors for Different Sized Frames..... 12
Quilts Covered with Propolis............ 12
Clipping the Queen's Wing 12
Bees in Northeastern Michigan 12
Mignonette.............................. 12
Space Below the Frames.................. 12
Bees in Georgia......................... 12
Poor Honey Season 13
Sixty Colonies on Summer Stands......... 13
Making Comb Foundation.................. 13
Clock-Work 13
Packed in Chaff......................... 13
Successful 13
The New Races of Bees 13
Poor Bee Pasturage 13
Bees in Florida 13
Worth $50 a Year to Me.................. 13
Hybrids as Honey Gatherers.............. 13
Enthusiastic Appreciation............... 13
Home Market for Honey 18
What a Contrast......................... 13
Wintering Nicely........................ 13

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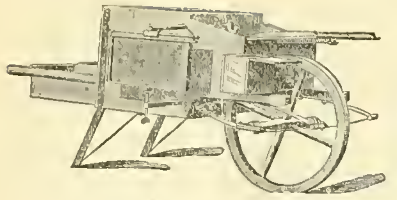

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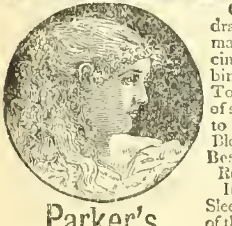

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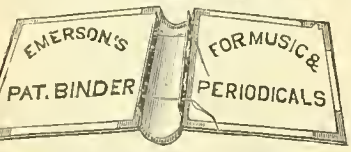

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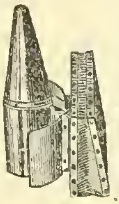

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My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—WM. VAN ANTWERP, M. D

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Buletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

—:o:—

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VOL. XVIII.—1882.—No. 1.

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CHICAGO, ILL., JANUARY 3.

"Hallelujah; 'Tis Done!"

This well-known and oft-repeated sentence expressed our feelings as we saw the last wagon load of BEE JOURNALS go to the post office, for the year 1881. It was a long and trying pull to get through with the first year of the Weekly; it involved the expenditure of considerable money, much labor of brains and hands, and, in the face of the all-but universal depletion of bees last winter, and its consequent depression on bee-keepers in the spring, it required a steady hand and dauntless courage to maintain the Weekly in these very trying circumstances.

"It is finished;" the first year of the Weekly BEE JOURNAL is complete, and we view it with satisfaction—believing that, as a Volume, it is second to none of its predecessors. The encouragement and general endorsement it has received is even *more* than our most sanguine expectations. The subscribers of last year are nearly all renewing their subscriptions for 1882, and, with their renewals, express their unbounded approbation. Many who have heretofore only taken one or two numbers a month, now desire it every week, and hundreds of *new* readers are already enrolled for 1882.

It is hardly necessary to say that, for the coming year, we shall devote all our energy, determined to make the JOURNAL even more interesting and instructive than it has heretofore been, if that is within the range of possibilities. Its record, character, power and usefulness, in the past, will be its guarantee for the future, ever keeping in view the one grand object of its existence, that of furthering the interests of honey producers, by losing no opportunity to create a demand for this God-given product, opening up new avenues for its use, creating new demands and eager purchasers, both at home and abroad—thus benefiting every honey producer.

With encouraged heart, we, to-day, commence anew the battle for *progress* —with the motto of "ONWARD" inscribed on our banner—fully aware that patient and persevering work will conquer all difficulties.

Neither financial depression, loss of bees, failure of the honey crop in some localities, nor the foolish jealousies and merciless abuse, heaped upon us by evil-disposed persons, has been able to materially hinder the usefulness of the BEE JOURNAL, nor, in the least, to retard its onward march. From year to year it has increased in size and frequency of issue, in order to give its thousands of readers and correspondents an opportunity to participate in an interchange of thought, and fully discuss the various topics of interest that are ever and anon presenting themselves to the apicultural world for investigation and decision.

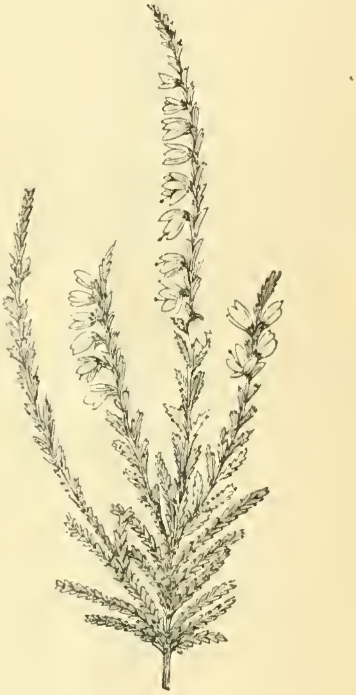
In short, the Weekly BEE JOURNAL will continue to be the medium of the best thoughts of the most advanced apiarists of this age. It will keep abreast of the highest progress, favor the freest discussion, and, by every means in its power, advance progressive bee-culture.

◆

Scotch Heather.

The true Scotch heather, *Caluna vulgaris*, the great honey producer of Scotland, has been found in America. As shown by botanical records, it exists at Tewksbury, Mass., on Cape Elizabeth, Maine, and in Cape Breton, Nova Scotia and New Foundland. Vick's *Magazine* contains the following historical record of the Scotch heather in America:

> The existence of this plant in this country was a matter of great interest in botanical circles in the year 1861, and for some time afterwards. In that year Mr. Jackson Dawson, a gardener of Boston, made it known that the plants were growing in a wild state at Tewksbury. At first it was deemed incredible that it could be a native of this country. Dr. Gray took a great interest in the subject, visiting the locality and examining the plants. All the facts being elicited from those living longest on the farm where it grows showed a knowledge of the existence of the plants in that field as early as 1810. and the condition of some of the plants at that time to be such as to warrant the belief that they were at least a hundred years old, thus placing their origin near the year 1700. That part of the country is sparsely settled, and at that early date was still more so, and the spot where the heather grows is quite an unlikely one to attempt its cultivation. After considering all the circumstances, Dr. Gray, writing in the *American Journal of Science*, said: "It may have been introduced, unlikely as it seems, or we may have to rank this heath with Scolopendrium officinarum, Subularia aquatica, and Marsilea quadrifolia as species of the old world so sparingly represented in the new that they are known only at single stations—perhaps late lingerers rather than new comers."
>
> Later, in 1864, when it was fully confirmed, as had previously been stated, that this heath grew in New Foundland, its indigenous character was quite accepted. Still later in the same year, it was announced that Calluna vulgaris was growing at St. Annis, on Cape Breton Island. And in 1865 the re-discovery of it in New Foundland occurred, near Ferryland, on the east coast, where there is a small patch of it. Since then, as already stated, it has been found in Maine and Nova Scotia.



The Scotch Heather.

> The plant being found in all these places, under conditions so unlikely for its introduction, little doubt remains that it is indigenous, and the probability that it is so is strengthened when it is considered, as has been noticed, that it exists at the extreme western limits of Europe, Ireland, Iceland, and the Azore Islands. New Foundland, Nova Scotia, Maine and Massachusetts are where it might naturally be expected, if found at all

on this continent. It is to be hoped that our Halifax friends will guard with scrupulous care the patch of it they yet possess.

Planting for Honey.

It is but a very short time since all the inquiries about planting for honey were answered nearly thus: "It will not pay to plant anything for the bees, unless it is useful for something else." The BEE JOURNAL for August, 1880, page 361, took the opposite ground, and now, to plant for honey has become almost as popular as the reverse was before that date. To furnish flora for our bees is just as reasonable and wise as to furnish pasture for our stock, and the time is coming when those who lack natural flora, and do not provide flora for the bees, will be thought as *old fogyish* as those who prefer box hives, black bees and from 6 to 10 pound boxes for surplus comb honey. It is very pleasing to notice the agricultural, as well as other bee papers besides the JOURNAL, coming into line and advocating *progress* in this matter. The *Indiana Farmer*, of last week, advises bee-keepers to plant for honey, and adds:

> We have not had the room and time for extensive planting ourselves; but so far as our personal experience goes, we are satisfied of the feasibility of the plan. We believe that it will pay in a financial point of view, and in the more settled districts is destined to become the chief corner-stone for profitable bee-keeping.

Yes, it "is destined to become the chief corner-stone for profitable bee-keeping;" there can be no doubt of it in the minds of reflecting, *practical* men. It it will pay to have bees work on basswood or white clover for a week or two, how much more profitable will it be to give them *continuous pasturage*, from which to gather honey from spring till frost? This is self-evident, and settles all controversy! By all means, plant for honey. There are many good honey-producers, but none are better than sweet clover—and none *can* give a more continuous flow of honey from June till after it is too cold for the bees to fly.

☞ On Dec. 31, 1881, Mr. W. F. Conner, 151 Water street, Chicago, made a voluntary assignment, and Elisha Moore, Jr., was appointed assignee. The liabilities are put down at about $1,800, and the assets are nominal. So said the Chicago *Tribune*. Mr. C. had handled some honey, but we hope bee-keepers are not largely interested.

☞ On page 395 of the BEE JOURNAL for Dec. 14, Mr. Heddon makes use of the following language, in speaking of comb foundation: "Every year I receive samples by mail, and wherever I have ordered a few pounds, I have never in a single instance received ever so small a lot equal to the samples. Nearly every piece of these samples betrays the use of soap." We have received several letters from foundation manufacturers in reference to this matter, all complaining of injustice done them by implication. Of course, this was far from Mr. Heddon's intention, who probably intended only to censure the frequent practice of selecting the finest specimens as samples of their general sales. We trust no further notice will be taken of this matter.

☞ Many topics suggested by our correspondents for editorial articles are waiting until we can get time to write them. We hope soon to reach them—we are very busy now.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Progress.—The Iowa City *Republican*, in its report of the Fine Stock Convention, held at Iowa City, Iowa, says:

> "Points of Progress in bee-keeping" by Rev. O. Clute, was the subject of an interesting address. The speaker, who has become well-known the country over, delighted an already tired audience with a wonderfully interesting impromtu talk. He explained his method of caring for bees, extracting honey, etc., illustrating his remarks by exhibiting his hives and other apparatus.

Progress of Bee-Culture in England.—F. R. Jackson, Esq., writes as follows to the *West Sussex Gazette:*

> Although there are few pursuits which with a like amount of care and capital yield equally remunerative results, apiculture, as compared with other branches of industry, has been, till lately, much neglected in England. In May, 1874, several philanthropic and spirited gentlemen acquainted with bee-keeping, much interested in its pursuit, and convinced of the practical benefits resulting therefrom, formed a committee, and instituted the British Bee-Keepers' Association, for the encouragement, improvement, and advancement of bee-culture in the United Kingdom, particularly as a means of bettering the condition of cottagers and the agricultural laboring classes, as well as for the advocacy of humanity to the industrious laborer—the honey bee. Under the auspices of this Association, the cottager soon found the hive bee the most profitable live stock, necessitating a very small outlay, and thriving with little expenditure of time, which could be given when most convenient. So successful has bee-keeping proved under the modern rational and humane system, that a hive of bees returns in ordinary seasons from 100 to 500 per cent. on its actual cost, many cottagers not only paying their rent by their bees, but realizing a considerable profit beyond this. Such success has attended the efforts of the British Bee-Keepers' Association, that numerous county associations have been formed, over three of which the Princess Christian, the Duke of Connaught, and the Archbishop of Canterbury preside. Many noblemen also, as Presidents and Vice Presidents, are interested in bee-keepers' associations, which are doing good work in their respective counties. Over the Parent Association, the Baroness Burdett-Coutts, ever ready to lead the way in encouraging works of practical utility, has for some time presided.
>
> No county in England is more favorable for bee-keeping than Sussex, for which a Bee-Keepers' Association is about being started, and the name of a popular nobleman as its President, augurs well for its prosperity and advancement. A pursuit at once so interesting and profitable, should surely meet with the hearty support and co-operation of all who have at heart the comfort and well-being of the industrious cottager.

Wasted Sweetness.—Mr. W. Z. Hutchinson, in the *Rural New Yorker*, says:

> There is, probably, enough honey that goes to waste for want of bees to gather it, to sweeten all of the pies, cakes and cookies that are baked. Upon nearly every eighty-acre farm there is enough honey secreted by the flowers each year to furnish its owner with "sweetening power" from honey harvest to honey harvest. It is admitted by our best apiarists that a few colonies in a place give better results than a large number; therefore, if the bees were scattered about, a few colonies at each farm, there would not be so much sweetness wasted. To be sure, there are, and probably always will be, people who make a specialty of bee-keeping, owning their hundreds of colonies; and this is all right; it is to such persons as these that we are indebted for the improvements that have made bee culture the safe, pleasant and profitable pursuit it now is; but this need not deter any farmer from keeping a few colonies of bees that will supply his table with that most delicious and healthful of sweets, pure honey. They will probably find bee-keeping to be one of the most fascinating occupations in which they were ever engaged.

Odd-Sized Frames.—In answer to a question in the *Bee-Keepers' Magazine* Prof. Hasbrouck, says:

> There is one serious objection to your plan. The size of frame you propose would be irregular, and on that account your bees would be unsalable at anything like their real value, if you should ever want to sell. Bees sell best in Langstroth or American frames, and probably as much honey can be taken with one of these frames as with the other, and as much with either as with frames of any other size. The honey secured depends more on the locations and upon the experience and skill of the bee-keeper, than upon the size of the frame he uses. If you are sure that neither you, nor your children, assignees, or executors will ever want to sell bees, you can put them into whatever frames suit your fancy, as long as you can make one of the standard size of sections fit along side, and on top of it.
>
> Don't think of using any irregular size of sections, even if you use an odd frame. The standard sections are kept in stock by supply dealers, and can be furnished cheaper, and on shorter notice than you can get any made to order. Besides they sell better when filled.

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Antiquity of the Bee.—An exchange remarks as follows on this subject:

> The bee bears the same relation to the other orders of insects that the Caucasian race bears to the other races of mankind; it is the highest type of insectian form and development. Endowed with itstinct, and "a kind of reason, differing perhaps only in degree from that of man, these insects outrank all other articulates." In the fossiliferous history of our earth, the bee does not date far back, but is the last to appear upon the earth's surface.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Jan. 10—Cortland Union, at Cortland, N. Y.
C. M. Bean, Sec., McGrawville, N. Y.
10—Eastern N. Y., at Central Bridge, N. Y.
N. D. West, Sec., Middleburgh, N. Y.
12, 13—Nebraska State, at Ashland, Neb.
Geo. M. Hawley, Sec., Lincoln, Neb.
17, 18—N. W. Ill. & S. W. Wis., at Freeport, Ill.
Jonathan Stewart, Sec., Rock City, Ill.
17, 18—N. E. Wisconsin, at Berlin, Wis.
T. F. Turner, Sec. pro tem.
24, 25—Indiana State, at Indianapolis, Ind.
25—Northeastern, at Utica, N. Y.
Geo. W. House, Sec., Fayetteville, N. Y.
April 11—Eastern Michigan, at Detroit, Mich.
A B. Weed, Sec., Detroit, Mich.
25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.
26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.
May ——Champlain Valley, at Bristol, Vt.
T. Brookins, Sec.
25—Iowa Central, at Winterset. Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Southeastern Michigan Convention.

The first annual meeting of the Southeastern Michigan Bee Keepers' Association was held at the Court House in Ann Arbor, Dec. 15, 1881. The meeting was called to order by the President.

Professor G. B. Steere, of the University, gave a very interesting address on "the Races of Bees," which imparted much valuable information. Speaking of the Asiatic races, he said: The large black bee was twice the size of our common bee, and built their nests under the limbs of trees, make a large quantity of wax and produce some honey. There are also the small bees that build their nests in rocks and hollow trees. There species of bees he thinks will not prosper in this climate. The large bee is very ferocious, and it is very dangerous to undertake to capture them. The small ones are not so bad, but do not gather so much honey. Bee hunting is a profession with the natives; wax being the principal product. The large bee is *Apis Dorsata*. The professor has a young man living with him that he brought from the Phillippine Islands, whose father is a bee hunter by trade. Taxes and church rates are there paid in beeswax. The Professor expects to get more information through this young native.

Another species found in the mountains of Formosa, where the climate is similar to ours, gather a good quantity and quality of honey, are very docile, live in the walls of houses, and are familiar with the family. He visited the mountains in his travels around the world, became acquainted with the missionaries, and thinks that they may be secured through them. He was chosen a committe to correspond with them in order that some nuclei may be obtained.

Dr. Ashley was very enthusiastic over the plan, and said we will call *Apis Formosa* the "coming bee."

The following essays were read: on wintering bees by N. A. Prudden; on feeding by L. W. Bodwell; on queen rearing by C. K. Bennett. The President gave an address, and several discussions followed. The following officers were elected: For President, H. D. Cutting, Clinton, Lenawee county; Joseph Butler, of Jackson, Vice President for Jackson county; C. K. Bennett, Vice President for Washtenaw county; and C. Thomson Briton, Livingston county; J. H. Murdock, of Dexter, Recording Secretary; G. J. Pease, Ann Arbor. Corresponding Secretary, and N. Eastwood, Ann Arbor, Treasurer.

The time and place of next meeting was left to the President, Secretaries and Treasurer, as an Executive Committe. N. A. Prudden.

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☞ The Northwestern Wisconsin Bee-Keepers' Association will meet in the City Hall at La Crosse, Wis., on Jan. 2, 1882. Essays and discussions on important subjects concerning bees will be the order.
L. H. Pammel, *Sec.*

The Northeastern Bee-Keepers' Association will hold their twelfth annual convention in the Common Council Halls, at Utica, N. Y., on the 25th, 26th, and 27th days of January, 1882. The executive committee are determined to maintain the high standing and enviable reputation the association has justly gained in the past, and propose to outdo all former efforts on this occasion. From present indications the coming convention promises to be the largest and most interesting ever held in America. New features will be introduced, and business of vital importance will be brought before the convention that makes it the duty of every member and bee-keeper to attend. Essays and addresses are expected from Capt. J. E. Hetherington, W. L. Tennant. L. C. Root, James Heddon, Chas. Dadant, T. G. Newman, N. N. Betsinger, Dr. A. H. Marks, and others of America's renowned apiarists, on the most interesting topics of the day. If you wish to enjoy the benefits to be derived from the good work already in progress by this association, you will surely attend. All are invited; none can afford to remain at home. Articles and implements of the apiary for exhibition, etc., should be sent to the Secretary, at Utica, N. Y., who will take personal charge of the same and arrange all articles so as to compare favorably with others on exhibition.
Dr. A. H. Marks, *Pres.*
Geo. W. House, *Sec.*

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☞ The Nebraska State Bee-Keepers' Association will hold its annual meeting in Ashland, Neb., on the 12th and 13th of January, 1882. A cordial invitation is extended to all who are interested in bee-culture. Members will be returned to their homes by the railroad companies at 1 cent per mile.
T. L. VonDorn, *Pres.*, Omaha.
G. M. Hawley, *Sec.*, Lincoln.

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☞ The eastern New York Bee-Keepers' Union Association, will hold their ninth Convention, Tuesday, Jan. 10, at10 a.m., at Central Bridge. Scho. Co., N.Y. W.D. Wright, *Pres.*
N. D. West, *Sec.*

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☞ The annual meeting of the N. W. Illinois and S. W. Wisconsin Bee-Keepers' Association, will be held in Temperance Hall, Freeport, Stephenson Co., Ill., on Jan. 17 and 18, 1882.
Jonathan Stewart, *Sec.*

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☞ The Indiana State Bee-Keepers Association is called to meet in annual session, Wednesday and Thursday, Jan. 24 and 25, 1882, in the rooms of the State Board of Agriculture. By order of Executive Committee.

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☞ The Texas State Bee-Keepers' Convention will be held at McKinney, Texas, on Tuesday, April 25, 1882.

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☞ Subscriptions may commence with the first number of any month in the year.

CORRESPONDENCE

For the American Bee Journal.

Foundation for Sections—A Review.

G. M. DOOLITTLE.

Just at the close of the honey season for 1875, I received from Wm. Hoge, of New York city, a package of comb foundation to use in boxes, he saying, as an explanation, that a great saving was to be gained by the use of it, as the bees would draw the side-walls out to full-length cells, thus making the combs out of the wax in the foundation. As it cost 20 lbs. of honey to make 1 lb. of wax, a saving of $4.00 per lb. was gained, as honey sold readily at 25 cents per lb. at that time, and a pound of foundation cost but $1.00. This was supposing, of course, that the pound of foundation would hold as much honey as a pound of natural comb, and as it all looked reasonable at first sight, I tested the matter by buying one pound of it.

As the honey season was so near being over, I had to feed some extracted honey to get the sections containing the foundation sealed over, when I had as nice-looking sections of honey as I ever saw built with natural comb. However, I was soon convinced that the claim of saving to the bees was erroneous, as upon cutting, or rather, trying to cut these sections of honey, the knife would stop when it came to the foundation, and upon examination (which was done by a little scraping and washing), I found I had my original piece of foundation untouched except as the bees had added their wax to it in building out the cells.

The next year more was used from different makers with like results, at which time I began to expostulate with A. I. Root, the most extensive manufacturer at that time, reasoning that in time our honey markets would be spoiled if we persisted in using such thick stuff as a base to the comb in our surplus honey. His reply was that "It has already grown into quite an industry, and we are using wax by the ton." Time passes, and 1877 finds me with plenty of foundation, made from my own wax, upon which many experiments were conducted; but at the end of the honey season we found all our honey built on foundation contained a thick base or "fish-bone" in the center. Again I expostulated with Mr. Root, but was met with the reply: "It is utterly incomprehensible to me the way you stick to your old notions on foundation; it has filled the markets with most beautiful honey."

About this time the BEE JOURNAL lifted up its voice of warning, and bee conventions resolved against its use for comb honey to such an extent that some of our large honey producers began to study on the matter of making a very thin foundation to overcome this difficulty. In due time the Van Deusen flat-bottomed foundation appeared before the public as a result, and we had foundation so thin that it took from 10 to 14 square feet to make a pound. This seemed to be successful as far as the "fish-bone" was concerned; but as the bees had to change the flat bottoms into a lozenge-shaped septum, it began to be whispered around that it was not accepted as readily by the bees as foundation with a natural-shaped septum. However, this was far ahead of any brought before the public so far, and thus it could be readily seen that we were making some progress.

During 1880 we hear of still another advance, as Mr. Vandervort has succeeded in producing foundation running from 10 to 12 square feet to the pound, with a lozenge-shaped base, which is said to work equally as well as the Van Deusen, and having none of the objections urged against that. Thus, we find the Northeastern Convention, in February, 1881, giving that the preference over the Van Deusen. We now find A. I. Root falling into line, and advertising, in his price list, *very thin* foundation for comb honey, running at least 10 square feet to the pound, and our faith is now quite strong that comb foundation for section honey will prove a success, for "out of a multitude of counselors cometh wisdom."

Accordingly, last spring, to make a thorough test, I procured foundation of the following parties: A. I. Root, Medina, O.; G. W. Stanley, Wyoming, N. Y.; J. G. Whitten, Genoa, N. Y.; R. Van Deusen, Sprout Brook, N. Y., and Chas. Dadant & Son, Hamilton, Ill. That procured of Root was his own make, but proved to run only 6½ feet to the pound, instead of 10 as advertised, and besides, it was made of very dark, dirty wax. That from Stanley was made on the Vandervort machine, was very nice wax, and run 11 feet to the pound. Mr. Whitten's was made on a Dunham machine, and was the nicest I had ever seen coming from a Dunham mill, as it run 10½ feet to the pound, and was made of nice wax. Mr. Van Deusen's was the thin flat-bottomed, which is, I think, the prettiest foundation to look at of any I have yet seen. Of Chas. Dadant & Son I had both the Root and Dunham.

The Root run about 7½ feet to the pound, and the Dunham about 6. As to the quality of wax, I will say this last was the nicest of all. I filled 20 section boxes full within ⅜ of an inch of the bottom with each kind, and marked the name of the party producing the foundation on each box. In due time these boxes were placed on the hives so that an equal number (six, one of each kind) was on each hive.

The different hives were examined at different times, and the result showed that the two kinds produced by Dadant, and that by Stanley, were worked upon about alike, and finished at nearly the same time. That produced by Root and Whitten was about a day later in being finished, while the Van Deusen was nearly three days behind the first named. This was taking the average time of the 20 colonies which worked upon them. Thus we proved by experiment, at least, that it did take time for the bees to manipulate the flat-bottomed foundation.

After all were off the hives we were anxious to know which kind had the thinnest base, or, in other words, which was the most free from the fish-bone center so much has been said about. Accordingly, I procured a very sensitive pair of scales, showing the variation of ¼ ounce accurately, and upon these fixed a No. 16 wire (being square at the end) so it stood perpendicular. I now placed the section of honey on this wire, letting it down carefully till the square end touched the base, and then watched the scale till the wire passed through, noting down the number of ounces resistance produced by the base of the foundation on this wire.

Each of the sections was thus subjected to this trial in three different places, when the amount was footed up and an average made, and the average of the 20 sections taken. When this was done, the same number of sections containing natural comb were subjected to the same test and an average taken, which gave us this showing: A. I. Root's make showed the average pressure of 6¾ ounces; G. W. Stanley's make (Vandervort), 4¼ ounces; J. G. Whitten's (very thin Dunham), 5½ ounces; R. Van Deusen's (flat-bottomed), 5 ounces; Dadant's (thin Root), 5¾ ounces; Dadant's (thin Dunham), 6½ ounces; natural comb, 4½ ounces. Thus it will be seen that the Stanley (Vandervort) foundation is even thinner than the natural comb, according to this showing; then in order comes the Van Deusen, Whitten (very thin Dunham), Dadant (Root), Dadant (Dunham) and A. I. Root (Root), none of which proved to be as thin as natural comb. These experiments were conducted carefully, to arrive at the truth of the matter as near as could be done in one season with 20 section boxes of each kind. This showing is very flattering indeed to Mr. Stanley.

I am in no way interested in the sale of any kind of foundation, consequently am not prejudiced in the least. One thing I wish to say about all foundation, which I have long believed to be so, but have had no chance to prove it so till the past season, which is this: At a time when honey is coming in moderately, say when a good colony is bringing in from 3 to 5 lbs. per day of extracted honey, comb foundation is a success in the surplus arrangement, but at a time when honey comes in with a rush, the same colony gathering from 12 to 20 pounds per day, it does not pay the cost, for my bees will fill a box having a starter of natural comb, and finish it, as quickly as they will one full of foundation by its side. All through basswood the past season, when honey was coming in slowly, the foundation was drawn out and finished before a box by its side with a starter was half filled, but when the rush came on from teasel and red clover, those with starters were filled fully as quick, as has been my experience for several years before.

Borodino, N. Y.

For the American Bee Journal.

Beautiful Bees.

J. W. WHITE.

"I do not breed bees for beauty, but for business." "I do not care for bands, but for honey." "The bees which gather most honey are the bees which look the prettiest." How many songs of this kind are sung and caught up and repeated all over the land, until the uninitiated would think that there must be some inherent weakness in beauty, and some peculiar virtue in uncomeliness. Is it true?

The all-wise Creator has given us a sense of the beautiful, and he ever seeks to gratify it in ten thousand ways. He has also given us a more or less clear perception that the beautiful and useful are in some way very closely related. Who, in beholding beautiful homes and lawns, beautiful farms and gardens, beautiful horses and cattle, beautiful fruits and grain, beautiful implements and machinery, and, not to add more, beautiful bees and honey, does not feel some gratification, and does not believe that in some way, excellent qualities are, or should be, embodied in their beautiful forms? Why do people pay more for honey put up in neat packages than in uncomely ones? Is it not because they know that the good and the useful are closely related.

For this reason I am in favor of beautiful bees. beautiful in form and beautiful in color.

BEAUTIFUL IN FORM.

This is the first and most important factor of beauty in bees, as it is of their use. Agility or rapidity of motion in the animal kingdom, in birds, beasts, fishes and insects, is found, in a corresponding form, graceful, long and tapering. The Italian bees are just as much superior to the blacks as their form is more beautiful. In looking over some old volumes of the BEE JOURNAL this morning, I found in vol. IV., page 57, the following from the pen of Charles Dadant:

"All (Italians) are alike in all hives, all have three yellow bands....and, above all, an abdomen more tapered—a body more slender, giving them a more graceful shape and brisker appearance than those of our would-be improved bees. As it is above all *in the shape of the body of the workers, that their superiority over the black bees resides*, we must *adhere especially to the shape of the Italian bees.*"

The italics are Dadant's. Has not this point been lost sight of too much, and in the effort to raise many queens for the market, has not beauty, and hence superiority, been sacrificed in many cases to numbers? Long, slender, tapering queens and workers are the most beautiful bees, and they are the best.

BEAUTIFUL IN COLOR.

Form should never be sacrificed for color, nor is it necessary. Can we not have the best qualities, not only in the prettiest forms, but also in the brightest colors? There is no law of necessity by which they can be divorced. The best fruits have the richest bloom. The best cattle may have the prettiest marks. The brighter color, as well as prettier form of the Italian bees, is the signal and promise of their superior qualities. When they are kept perfectly pure in the clear, bright atmosphere of America, they grow into brighter colors, and, if they retain their perfect form, are as good honey gatherers as the newly imported Italians, or even better. Is it not possible that a good deal of the contempt for light-colored bees has arisen from prejudice, or something worse? In most places, owing to more or less admixture of black blood, it is a good deal easier to raise dark or leather-colored Italians than it is to raise queens which will produce light, three-banded workers. The first Italian queens I ever had, I bought from Langstroth, Quinby and Cary. They were all warranted to produce three-banded workers, and they did it.

In 16 years' experience, I have found that the bright Italians, as a rule, are in no way inferior to the darker ones. This last summer I gave special attention to this, and found that my lightest-colored bees are the very best workers I have. As I saw in the papers so much about superior colonies of the dark Italians, I sent to a number of the most reliable and widely-known men who offered queens for sale. It cost something, but I got my money back, if not in better bees—in a better knowledge of what others are doing.

If these dark-colored Italians have not some black blood in them, their looks and their manners belie them. Possibly their mother, or their grandmothers had a taint of black blood in them before they left Europe. They may be good honey gatherers—so are the hybrids. A pure Italian queen which has mated with a black drone, the kind I had 16 years ago, will produce good workers, and the queens raised from her will be large and prolific, and their workers very energetic and industrious. But as yet, I have found nothing which pleases me so well as beautiful Italians—beautiful in both form and color.

One point more: Bees, as everything else, have their normal size. All queens under the normal size should be rejected, at least they should never be used to breed from. It may produce no apparent change to breed from small queens for one or two generations, but if persevered in, it may produce dwarfed bees.

When I first commenced raising queens, I had some quite small ones; some of them did well, and some of them laid small eggs, and their bees when they first came out of the cell, were too small. There is danger here. In all the queens I have bought for years from different parties, there was only one or two which were not below the normal size.

As the result of all my experience and observations, I say in all sincerity, let others have what they will, but give me the long, tapering, three-banded Italians, and if they have been long enough in this country to become naturalized, and to hang out the American colors, so much the better. A bright and beautiful bee is the bee for me, the bee for honey, and the bee for money.

Milroy, Pa., Dec. 15, 1881.

For the American Bee Journal.

Handling Bees Without Protection.

WM. F. CLARKE.

I have just been reading a bit of Mrs. Harrison's experience in bee manipulation, as narrated in the *Prairie Farmer* of Dec. 17, and enjoyed a hearty laugh over it. Her ladyship was in such a hurry to try "Hill's Devices" for successful wintering, that, to use her own words, "we forgot to put on our wire hat and gloves, until reminded of them by receiving a sting on the nose, another on the cheek, and a bracelet of them around our wrists. Although we were destitute of an audience, we expressed our mind pretty freely with reference to those who advise working with bees without any protection. After delivering this essay we retired to the house, pulled out the stings, and, donning wire hat and gloves, went out again to the apiary a much smarter though sadder woman." The above would read better to my notion, if "I" and "my" had been used instead of "we" and "our." Not only so, but we could then concentrate all our sympathy on one sufferer. I wish I had been the audience to have heard that piece of Mrs. H's mind which she delivered so freely in regard to those who advise working among bees without any protection. But I add my "Amen" to it all the same, that is if she didn't say anything stronger than "drat-em," or "confound-em," which, of course, being a lady, may be taken for granted. Still, if she felt like the school-girl who wished she were a boy just for a little while, when she dropped her school-books in the mud, I should not be disposed to blame her very severely.

Very absurd things are sometimes said by bee-keepers of high standing about the use of veils and gloves, and the idea is often conveyed that, having recourse to them, is proof positive of want of certain qualities essential to apiarian eminence. I wish this class of bee-keepers, as well as myself, had heard Mrs. Harrison's impromptu remarks on the occasion in question. Judge M, an old friend of mine, and an enthusiastic amateur bee-keeper, was one of those who would have been "hit hard" by Mrs. Harrison, if he had been within hearing of her cursory remarks. But he was converted a long time ago by a bit of personal experience. It was a favorite pastime of his to poke fun at me for using a veil and gloves, but one day he called on me and said: "I have come to own up; yes, I confess the corn. After this, I shall wear a veil and gloves in handling bees." He then went on to relate, that, the day before, he was taking an after-dinner look at his apiary, when, by some mischance, his foot slipped, and he fell heavily against a hive of bees, knocking it over. Instantly, the disturbed occupants came at him with fire and fury. Fortunately, the grass was long, and there was a big Norway spruce, well brushed to the ground, close by. Quick as thought he dropped, and crawling forward got his head esconced in the evergreen brush. There he lay, the bees not standing, but flying guard all around him. They kept him prisoner till the shades of evening gathered, and he improved the passing hours by thinking over some law cases he had on hand, rising, at last, smarter and sadder, like Mrs. Harrison. To guard against possible contingencies, it is well to be protected.

But why does Mrs. H. use a wire hat? It is a stiff, clumsy affair, and gets unpleasantly rusty with the moist breath. Black netting is better. A veil of any kind is rather close and hot, especially in July weather, but a Turkish bath does one good, and I get several in the course of a season, without expenditure of money, or loss of time, as one of the casual advantages of bee-keeping.

Listowel. Dec. 22, 1881.

For the American Bee Journal.

Salicylic Acid and Foul Brood.

A. R. KOHNKE.

The difference of opinion as to the probability or possibility of curing foul brood, as stated in the proceedings of the Michigan State Convention, I consider very damaging to the bee-keeping public at large; the more so, when noted bee-keepers disagree on the subject. Mr. C. F. Muth says it can be cured by the use of salicylic acid, while Mr. D. A. Jones asserts he has thoroughly tested it, and found it of no use, indirectly hinting that he has another and surer remedy. From the nature of the disease, I doubt Mr. Jones having had a case of genuine foul brood. Nor will Mr. Townley's remedy stay the progress of the disease among his remaining bees, if it has attacked as many as 60 or 70 colonies, for he could not possibly know what colonies of the remainder had caught the contagion before the disease makes its appearance among the brood.

But, then, there is a great deal in knowing how to do a thing. It would take more space than I am allowed in this article to describe, minutely, the *modus operandi*. but I will say this much, if Mr. Jones knows of a better remedy, please let us bee-keepers have the benefit of it; if not, I make the following proposition to him: I agree to go to his apiary next summer, first week in July, to cure with salicylic acid a genuine case of foul brood, if he has such; if he has not, he may designate any other infected apiary accessible by railroad, lying between the Missouri river and 4th deg. long. east of Washington, and between the 40th and 48th degs. north latitude. If I succeed, he is to pay me $500 and all expenses of traveling and boarding; if I do not succeed, he is to pay nothing, I assuming the loss of time and money expended. provided, however, there is no foul brood in the neighborhood outside of the apiary treated, whereby bees in that apiary may be exposed to continuous contagion. It will take from 3 to 6 weeks to do it, according to whether or not there are many colonies, and badly diseased. My time would, of course, be worth more than the above sum asked, as I want to carry on some experiments at home, to do which I would have to engage a competent man; but I wish to remove all doubts with bee-keepers as to the curing of foul brood, and Mr. Jones will have the choice of either accepting my proposition, or acknowledge to have been mistaken as to his thorough test of salicylic acid.

Youngstown, O., Dec., 1881.

For the American Bee Journal.

Extracted Honey—No. 1.

JAMES HEDDON.

After wishing each other a happy and successful New Year, do we not all feel that our past year's discussions through the BEE JOURNAL, though they sometimes waxed warm, have been the means of giving us more light, and bringing us nearer to that point which we never can reach—perfection. Each of us may have thrown out some erroneous theories, but they served a useful purpose in arousing a desire to put truth in their place upon the part of others who knew the facts better.

Thus we are all helping each other slowly, but surely, up the hill of science. All we ask of each other is our last and best thoughts, honestly expressed, and that each accords to the other, freely, all the rights expected by himself; and he that is not willing to do this, is not yet morally or intellectually civilized.

I feel that no one should commence a series of articles upon the subject of "Extracted Honey," without mentioning the names of Chas. Dadant & Son, and referring to their little book upon this topic. If the value of a work consists in its candid, able and practical style, the quick adaptability of means to ends, and the profit to be realized by following its instructions, then, in my judgment, this little work on "Extracted Honey," for its size and cost, stands unrivalled by any book ever written upon the subject of apiculture. While the little work describes ways and means very different from what we would use to reach the same end, in each case the result reached is the same. In these articles I desire to pick up what stray heads of grain I can, that may have been left after Messrs. Dadants' harvester.

It may seem strange that a comb honey producer should choose this subject, but till within a very few years the greater portion of my production has been extracted honey. In this article I wish to consider the value of the commodity viewed from a palatable and hygienic standpoint. While my knowledge of chemistry is very limited, I know a few primary principles that I think apply directly to the case under discussion. Honey is palatably enjoyed for its sweetness. Chemistry tells us that it ranks with glucose, in respect to that element, and that they are about one-third as sweet as cane sugar. This seems a bad defect—let us see:

Chemistry, also (like all sciences, modest and truthful) tells us that wood fiber (sawdust) possesses the same elements that glucose does. It admits it cannot see through it, sawdust is not sweet, and then asks, What is sweetness? No one being so well able to solve the problem, all look to chemistry with longing eyes, and she says, "it seems to me to be, simply, a peculiar arrangement of molecules that produce, by such arrangement, a certain sensation in the mouth called sweet."

Thus we see that at last the consumer is left to be the judge. This consumer has been in the habit, in the past, of calling honey the "sweetest of all sweets." If I am not much mistaken, all consumers of to-day who have judged only by their taste, believe honey to be first class in its sweetness. I remember reading in the BEE JOURNAL some years ago that honey was 88 per cent. as sweet as cane sugar. It seems that, after all, honey will assume for itself all the value established by the appetite. Chemistry may tell us to-day and to-morrow that glucose and honey are essentially the same—both grape sugar—of the same sweetness, etc., but that is not the impression upon the taste of man, or the health of bees. Any one who has taken a mouthful of glucose, was no doubt surprised at the lack of sweetness and general tastelessness of the stuff, notwithstanding that honey has been his standard. Now, if it should prove to be a fact that honey effects this sweet sensation in the glands of the taste only, that it fails to exhibit the same power in the stomach or in cookery, then that will be an argument against it as a staple, but largely in its favor as a luxury; perhaps so much so as to make it a staple luxury, like oysters, etc.

The indulgence in the pleasure of sweet-eating is, in this land of luxury and plenty, carried to excess, often to the extent of overbalancing the system. Of course, it is the principle of sweet acting upon the body below the glands of taste, that produces the bad effects. I am of the opinion that in honey we can "get the game without the blame," for I have never been able to eat enough of it yet to feel that my system was surfeited with sweet, as I have realized from excessive indulgence in cane and maple sugars.

The acute disturbances experienced by exceptional individuals, no doubt arise from their peculiar idiosyncrasies. Their stomachs probably contain, to an eminent degree, some peculiar elements that are very antagonistic to elements contained in the honey—some acids deposited by the glands of the bees, or some element in the floating pollen.

Most of us know that by subjecting honey to the degree of heat that boils water, for a short time, the particles of floating pollen appear to be either discharged or dissolved; also certain acids seem to be discharged. Should the very least part of growth have begun (thus giving the honey a "twangey" taste). the degree of heat referred to destroys the bacteria, and honey, after being thus treated, will agree with many who cannot use it before such heating. This a point well for us to remember.

Were it not for the aid of that element heat, as applied to our food, there is little doubt but man would, to a far greater degree than at present, become a prey to these low forms of animal and vegetable life.

In comparing comb with extracted honey, little need be said. If extracted is more healthful than comb honey, I think it is only that which has been heated. The idea that wax, because indigestible is injurious, I deem a mistake. Physiologists tell us that the pylorus (the gate between the stomach and intestines) readily opens and lets through any indigestible substance, while it struggles long and hard with any food possibly digestible, and with the class difficult of digestion is where our trouble arises. One celebrated physiologist believes that a portion of certain kinds of wholly indigestible material, taken at our meals, serves a beneficent purpose. I would sooner think the particles of wax, so small as they are, were more favorable than otherwise.

I think the only question involving a discussion upon comb *vs.* extracted honey, is the one of greatest profit to the producer. I will touch that subject further on in these articles.

Dowagiac, Mich., Dec. 26, 1881.

For the American Bee Journal.

Improvement of Bees.

L. R. JACKSON.

Much has been said on this subject of late, and yet we are not agreed. Many queen breeders, and especially dollar-queen men, claim there is no improvement to be made in our Italian bees, and the best we can do is to rear our queens from imported mothers. Others claim they can be improved the same as other stock. I have said bees can be and have been improved, and I think the majority of successful honey producers agree with me in this.

Rev. A. Salisbury, in the AMERICAN BEE JOURNAL of May 9, page 74, says: "Our American Italians have been bred up to a high standard of excellence, and we want no step backward by importing inferior bees from Italy."

G. M. Doolittle, in his report for 1881, in *Gleanings*, page 527, says: "One thing we notice with pleasure which was that our colonies gave nearly an equal yield per hive. This is what I have been breeding for for the past few years, hoping to obtain like results from all, and not have one colony in the yard give a large yield and another nothing. When we, as apiarists of America, can bring our bees up to such a standard of excellence that all colonies will produce an equal amount of honey, and said amount be as large as that produced by our very best colony of a few years ago, we shall have no further need of importing colonies, for *Apis Americana* will be the best bee in the world."

I have believed for three years that our bees could be improved until there will be but little difference in the amount of honey produced by any of our colonies. I find that my record book shows less difference each year since I have been trying to improve my bees, and I know I am not getting less honey, so it must be an improvement.

G. W. Demaree, in reply to an article of Doolittle's, says, on page 219 of the AMERICAN BEE JOURNAL: "Mr. Doolittle's advice, to breed from the queen whose colony produces the most honey, is a good theory, but in my opinion, poor practice." I have for years selected my best colonies for my queens and drones, and in my opinion it is the best thing we can do if we want good honey gatherers. Again Mr. Demaree says, on page 258 of the AMERCAN BEE JOURNAL: "To rear good queens we are told that we must select one colony to rear our queens from and another to furnish the drones to fertilize them, and we are ready for business. This looks quite business-like, and doubtless would answer well enough if the apiarist resided in some secluded spot where the wings of the honey bee had never fanned the air." Now, we do not claim that we can have every one of our queens mate with one of these select drones, neither do we claim it can be done at all times of the year, but we do claim we can have a large majority of our queens mate with these selected drones. I will give my plan of rearing queens. I breed for the honey gathering qualities, hardiness, and amiability. I select the queen that has given the largest amount of honey and has wintered best to rear my drones from; I then select as many of the next best as I wish to rear queens from. At least one of these queens must be selected from some other apiary to prevent too close in-and-in breeding. By the first of April I give each of these colonies a frame well filled with pollen, having been set away the summer before. I place plenty of drone comb in the hive I wish to rear drones from, and have the other hives all worker comb. I remove all combs the bees cannot cover and place a chaff cushion on each side of the cluster and a good thick cushion on top of the frames. I now commence to feed each of these colonies what they will use each day, and give more combs as fast as they will use them until they are built up to full colonies. As fast as a frame is filled with drone brood I remove it to one of the other colonies and give another frame of drone brood until I have as many drones as I want. I continue feeding each day until the bees swarm; I then remove three frames having no queen cells. I place these in a new hive and place a chaff division board on each side, and place the queen on these frames with bees enough to cover them and return the rest of the bees to the old hive. In 5 days I divide the old colony up into nuclei—2 frames and a queen cell. I now break my drone colony up into nuclei for the remainder of the queen cells. If I still have queen cells left and wish to use them, I take frames from the colonies that have not been fed, if there are any that can spare them. These young queens will be fertilized before colonies that have been left to themselves will have any drones flying. Further south than this we should begin work earlier than the first of April. These nuclei can soon be built up to good strong colonies. This plan, of course, would not do for rearing large quantities of queens for sale at the price queens are now sold. I am not in the queen trade, being one who believes if it pays to keep bees at all it will pay to keep them for the honey they will gather. I have never made an average of less than $5.50 per colony for the honey sold, besides the increase, and have run as high as $24.00 per colony for all the bees I had in the spring. This is over and above all expenses, except for the new hive, and that expense I count to the new swarm. Next year I will try a few Syrian queens crossed with Italian drones, and a few with the second cross with Italians.

Friend Doolittle, would it not pay you to write a book on bee-keeping? We all know you are a successful bee-keeper, and when we want advice we need to go to one who is successful. I would be glad to have a book written by you and would pay a good price for one. It is true we have a number of good works on the apiary, but I believe a work could be written on the practical management of bees that would be of more use to the honey producer than any of them, and I have confidence enough in your plan of managing bees to believe you could give us just such a work as we need.

Fairland, Ind., Dec. 26, 1881.

From Florida Agriculturist.

Bee-Culture in Florida.

W. S. HART.

To the industrious bee-keeper, the coast counties of Southern Florida offer a field of profit unsurpassed by any other section of the United States. Among these counties, Volusia is at present ahead in amount of bees owned and honey produced. Here we have none of the winter troubles incident to Northern bee-keeping, such as winter packing, carrying in and out of cellars and bee-houses, freezing, dysentery, dwindling, etc., the last two of which carried off 50 per cent. of all the bees in the north during the past winter. That dreaded disease, "foul brood," is also unknown here. Our bees winter perfectly on the summer stands, and gather honey or pollen every month in the year. The honey flow commences about the first of February, and swarming about the 10th of March. In April or May we usually have a honey drouth of a few weeks, sufficient to check the swarming fever. Then comes the saw-palmetto, sweet bay, basswood, etc., giving a flow of very heavy honey, of a light amber color, and excellent flavor. This flow lasts until the cabbage-palmetto and mangrove come, in the last part of June. From this on until about the 10th of August, the flow is continuous and heavy, the honey as handsome as can be produced, and of very fine flavor.

A resting spell now comes for the bees, which lasts until the middle of September, when the fall flowers, and later, the saw-palmetto berries yield a surplus of darker honey, suitable for winter supplies or spring feeding. As bees fly here almost every day in the year, fall honey can be fed without fear of dysentery.

Some of the leading honey and pollen producing trees are the maple, willow, sweet gum, the bays, orange, myrtle, oaks, basswood, hickory, youpon, mock olive, saw-palmetto, cabbage-palmetto and mangrove. The last two of which come together in the middle of summer, and are unequaled as honey producers by any thing else in the whole vegetable kingdom known to the writer. They produce honey in abundance of the finest quality, and we think it safe to say, never fail to produce a good crop. We also have honey-producing vines and plants too numerous to mention.

Bees increase very fast, and, as the season is long, and the winter mild, even a small handful of bees can be safely built up into a strong colony in a short time.

The writer started this past spring with 35 colonies, which increased to 86; some were disposed of, and others run for comb honey or queen raising, so there were but 60 colonies worked exclusively for extracted honey. From these I took 6,210 lbs. of honey by Aug. 10. I have since taken a few hundred pounds—enough to make my crop foot up 7,500 lbs., without putting my bees on short allowance. Several of my neighbors have done nearly as well.

Transportation for our crop to all the large markets of the world by water is good, and getting better every year. Hive lumber is cheap. Living is inexpensive, and orange growing (our leading industry here), can be coupled with bee-keeping to the advantage of both.

The bee's a model citizen—ease, food,
Life, all is yielded to the public good;
No individual interests weigh a grain,
Where there are public interests to maintain;
As in old Rome, when all were for the State,
Rich helped the poor, and poor men loved the
great.

New Smyrna, Fla.

For the American Bee Journal.

Notes from Western Missouri.

LEE EMRICK.

Another year is numbered with the past. A year remarkable for its extremes of heat and cold; of floodsand drouth, and closing with weather mild and spring-like. But mid all these changes the BEE JOURNAL has never failed to make its weekly call, and in renewing my subscription for the coming year I know I will be entertained and benefited as I certainly have been in the past.

The past winter was most disastrous to bees, as many empty hives forcibly tell. I had 105 colonies at the beginning of winter. When the peach bloomed I could count but 45. By natural swarming my number now stands at 70, and I think in good condition, in numbers and stores. The honey crop was a failure. From 40 colonies in two story Langstroth hives, I extracted about 600 pounds, or an average of 15 pounds to the colony. From 30 colonies run for comb honey, I had no surplus. I sold my extracted honey readily at 15 cents per pound.

By this showing, any one can see that my bank account would be small if I depended on bee keeping alone. But I combine it with stock raising and farming, and so a failure of the honey crop is not so severely felt. The sweet clover certainly is to be prized as a honey plant; it blossomed longer than any other plant during the severe drouth of the past summer. I have been trying alsike clover, but it has not yet proved a success. I do not think it adapted to this climate.

Harrisonville, Mo., Dec. 28, 1881.

For the American Bee Journal.

Sweet Clover for Bottom Lands.

WM. BOLLING.

Bees in this part of the country are not in as good a condition to go into winter as they might be. The fall flow of honey was very small; the blossoms of goldenrod and aster dried up before they had fairly opened, and bees worked very little on them; this stopped late breeding, and but little brood was found in the hives by the end of September.

I packed my 42 colonies of bees for winter on their summer stands, in the same manner as described in BEE JOURNAL for Aug. 3, page 241. I had some 200 lbs. of honey in frames ready to extract, but while the drouth continued, I kept it for future necessity, and when I packed my bees, it was just the thing I needed to let my bees have plenty of honey to winter on.

Honey has been sold here from 15 to 18 cts. for comb, and 10 to 14 cts. for extracted. I have sold all my extracted honey to the laboring class of people for 14 cts. per lb., who want to put the honey on bread for their children on going to school. Two lbs. of honey will cost no more than 1 lb. of butter, and the former will go much further than the later.

As soon as we have educated the laboring classes in this country to use honey in this way, and that honey is as wholesome and healthful for their children as butter, honey producers will never see the market glutted with extracted honey.

Allow me to say to Mr. E. Doty, Macksburg, Iowa, that he can plant nothing better on his 8 acres of bottom lands than sweet clover to answer every purpose. Sweet clover will grow on bottom lands, even if the point of the roots will touch the water. One of my neighbors had about 2 acres on the bottom of the Big Canadaway Creek, thickly grown with sweet clover; he mowed it in June, but when in August and September the sun had burnt up every green thing in the pastures, and farmers had to feed their cows from the hay-mow, his cows had plenty of green clover to eat, and could make butter without extra cost for grain; and last, though not least, my bees gathered the honey and worked on it from early morning until late at night.

Dunkirk, N. Y., Dec. 15, 1881.

For the American Bee Journal.

The Apiary Register Book.

M. L. TRESTER.

I like Mr. Thomas' suggestions about the form of this book. I would like a book ruled as follows: First column, number of stand or location, which is always permanent; then, number of hive, which is liable to be changed from one stand to another; age of colony; age of queen; race of bees from which the queen came; estimated number of bees in a colony, estimated amount of honey in the hive; when the honey was last taken away; date of last observation; two or three blank columns for apiarists to place a heading to suit themselves, and a wide column for remarks, simply a good book or none.

One year ago I packed straw all around and over the hives, two or three feet thick, leaving open the small entrance, and I lost them all. I bought two Italian colonies in the spring and started anew; increased to 14 colonies by division, and extracted 230 lbs. of honey, leaving them plenty for winter. If I have ten colonies in the spring I will feel positive that I have made over four hundred per cent. I like the BEE JOURNAL and my bees very much, but if I had a cast iron nose and upper lip I would like the bees better.

Lincoln, Neb., Dec. 17, 1881.

For the American Bee Journal.

Consumption of Honey in Winter.

REV. DR. M. MAHIN.

In the AMERICAN BEE JOURNAL December 28, W. Williamson, Lexington, Kentucky, says of bees flying out in such weather as we have had during the winter so far, "Of course they consume more honey." I am well satisfied from my observation during the last twelve years that this is a mistake, though a very common one. Two and four years ago the bees flew out almost every week, and sometimes almost every day for weeks at a time, and the consumption of honey was much less than in cold winters. If breeding were carried on abundantly the consumption of food would be large; but it is not, and with a moderate supply of honey I apprehend no danger from starvation. So far my bees, which are on the summer stands, have consumed but little honey, as indicated by the particles of comb dropped on the bottom boards. I do not know, of course, how much warmer the weather is in Kentucky than it is here; but I do know that in this part of the country the prospect for safe and successful wintering could not be better.

I am very much pleased, so far, with the Syrian bees. Mine are easily handled, and they are much more quiet in warm fall and winter weather than either blacks or Italians. And yet they will put dead bees outside of the hive when the temperature is below freezing. I will, if I live, give them a more thorough trial next year. I have but one purely mated queen, and I procured her from D. A. Jones, and of course she is pure and purely mated. I have three queens raised from her, but they were so late that I have not seen very many of their progeny. I think they mated with black drones. I have never seen bees fill themselves with honey, when the hive is opened, more eagerly than do the Syrians. They are somewhat excitable, and threaten to sting, but they seldom do it. If they prove equal to my expectations, I will Syrianize a large part of my apiary.

Of course, I want the Bee Journal for next year, and all the rest of the years while I live and keep bees.

Logansport, Ind.

For the American Bee Journal.

Bee-Keeping in Kansas.

E. M. LEWIS.

July 1, 1880, I purchased 11 nuclei, consisting of 1 queen and 1 lb. of bees each—put them at work in movable frames filled with comb foundation, but the season was so dry that even buckwheat and the fall flowers secreted but very little honey, consequently my bees did not have sufficient honey for such a winter as followed; therefore, I, like many others, lost most of my bees. But, having the combs and hives, I thought I would try it again. This time I sent for the same number at $3 per nuclei, to be delivered the 1st of March, 1881, thinking this time I should succeed. They worked well up till June 9, then we got a great storm of wind, rain and hail, which destroyed and cut to the ground everything but timber and fences.

Now came the question what shall I do with my bees. They must all be fed for an indefinate time or die. I procured syrup, and fed them regularly every day for six weeks; then I had the bees in good condition, if there had been anything for them to gather. But the drouth following the wet spring continued, and I gave up in disgust with Kansas as a bee state, discontinued feeding, and said they might go; I would spend no more time or money on them. The result was some 3 or 4 colonies flew away, and then came a nice rain, and then another and so on.

There being some buckwheat and late flowers, they have laid up enough, I think, to go through until spring. I packed 8 in straw and buried 9 in a clamp as recomended by D. B. Boomhower of N. Y., who published his success in wintering in the Journal.

Hanover, Kan.

For the American Bee Journal.

Bee and Honey Shows.

A. C. INNIS.

In attending the State Fair, held at Fond du Lac, I was very much disappointed at the limited show of the products of the apiary as well as bee-keepers' supplies. Being an amateur, I went there with the intention of learning something of a practical nature, but I had the good fortune to make the acquaintance of Mr. A. A. Winslow, of New Holstein, a thorough apiarist, and from him obtained much information, and also a good honey extractor.

I began the season of 1880 with one colony, increased to 3, and obtained 17 lbs. of honey, wintered without loss, in the cellar, but owing to ignorance, lost 1 by robbing. Last spring I purchased 2 more colonies increased to 8, which are in the best possible condition, and obtained 220 lbs. honey—17 lbs. being extracted.

My expenditures amount to $38,70; the honey obtained amounts to $42,75 and the 8 colonies, I value at $48.

I am satisfied that it will pay to keep bees if done intelligently. Count me as a life subscriber to the Journal, for without it I should be like a ship at sea without a rudder. I am laughed at here as a fanatic, but so long as I feel that I am on the right track I can sit in my apiary and laugh in return at those who are trying to make bees pay in the old slip-shod way.

West Rosendale, Wis., Dec. 22, 1881.

For the American Bee Journal.

Good Pasturage for Bees.

PHILIP P. NELSON.

If I should compute, in dollars, the benefit the Bee Journal has been to me during the past two years, it would cause the subscription price to look exceedingly reasonable.

The 10 colonies that I had left in the spring increased to 27, which are now in first class condition. I did not keep account of the pounds but have sold $125.00 worth of honey in one and 2 lb. sections. The income from my best colony, in honey and bees at present prices, amounts to $56.00. My bees are mostly hybrids. I have had one Italian queen. Most of the native bees here are a sort of a brown German kind, but very good bees. The Italian blood crosses on them with excellent results; producing fine workers, gentle to handle.

I have no trouble to sell honey; the great difficulty is to produce enough to meet the demand.

I am a farmer and stock raiser, and cannot give my bees the attention that I would like to, and yet I cannot get all the good from the land unless I have the honey gathered. This year from one pasture I had an income at one time of milk, honey, butter, beef, pork and mutton, and I might add horseflesh. I am greatly interested in planting for honey; buckwheat does not seem to do much good here. Turner rasberries and catnip are the most eagerly sought after of any plants that grow here. Sweet clover grows in great profusion along many of the lanes; the bees always work on it, but I have never seen them go for it very lively; it is pretty sure to yield some honey, and I have noticed that bees that had sweet clover to work on, wintered better last winter than those that had none. We often get a big yield of heartsease honey. I consider it about the worst for wintering purposes, and yet it is fine honey to sell.

Manteno, Ill., Dec. 28, 1881.

Farmers' Home Journal.

Purity of Honey Guaranteed.

W. WILLIAMSON.

At the last annual Convention of the State Bee-Keepers' Association, the question of adulteration of honey was discussed with great earnestness, and a unanimous resolution passed and a committee appointed to prepare a new act and endeavor to have it passed at the present session of the Legislature. The law at present reads as follows:

Sec. 1. Be it enacted by the General Assembly of the Commonweath of Kentucky, that any person or persons who shall sell or cause to be sold any manufactured honey, unless such honey is so represented and designated as manufactured honey, shall for the first offense, be fined in any sum not less than ten nor more than one hundred dollars; and for each repeated offense shall be fined not less than fifty dollars nor more than two hundred and fifty dollars.

Sec. 2. That any person or persons who shall sell or cause to be sold any such manufactured honey which contains any substance injurious to health, shall, for the first offense, be fined in any sum not less than ten nor more than one hundred dollars, and for each repeated offense shall be fined not less than fifty nor more than two hundred and fifty dollars; and such adulterated articles, by order of court, shall be destroyed.

Sec. 3. This act shall take effect from its passage.

The adulteration of honey is carried on to such an extent that people in large cities cannot tell where to purchase pure honey. Hence the necessity of a stringent law that cannot be evaded (if it is possible to make such a law). Such an act would not only protect the bee-keepers, but protect the public from fraud and deception, such as the adulteration of food. It is also detrimental to the public health, and if a law can be made that will guarantee the purity of the food we eat, it ought to be made at once.

Lexington, Ky.

SELECTIONS FROM OUR LETTER BOX

Recipe for Making Honey Pop-Corn Balls.—Take one pint of extracted honey, put in an iron frying pan and boil until very thick, then stir in freshly parched corn, and when cool mold into balls. These will especially delight the children, and the older ones will not refuse them. Try them.

MRS. A. M. SANDERS.

Interested.—As a bee-keeper I cannot do without the JOURNAL, and even if I did not keep bees I should take it for the interesting information it contains on scientific matters.

L. JOHNSON.

Walton, Ky., Dec. 26, 1881.

A Correction.—In the BEE JOURNAL of Dec. 14, page 397, H. P. Sayles is reported saying that "the Italians required more care and attention than the blacks, and he believed, taking the season through, that he could get more box honey from the blacks than the Italians, and a better quality of extracted honey." It was Mr. John Hodgson that expressed himself in that way respecting the two races of bees, and not Mr. Sayles. Mr. Sayles was emphatic in expressing his preference for Italians to black bees, and Mr. Hodgson for blacks in preference to Italian bees. Further on in the report of the Northeastern Wisconsin Convention, on "the Yield and Increase of the Present Year," Mr. Sayles' increase in stock is omitted entirely. He had increased to 38 full colonies. His yield and increase was regarded as the largest of any one present, but leaving out his increase of stock, it would not be as large as some others. Will you, Mr. Editor, make this correction for the benefit of all concerned.

T. E. TURNER, *Sec. pro tem.*

State Society for New Jersey.—In BEE JOURNAL for Dec. 7, I see Mr. G. W. Thompson sounds a bugle-note for a State Society for New Jersey. That is what we want. It is high time New Jersey was on her feet in this matter.

CHAS. H. RUE.

Manalapan, N. J., Dec. 23, 1881.

Bees Wintering Well.—Bees are wintering nicely so far; they had a good flight on Nov. 30, and again Dec. 18 and 19. They went into winter with plenty of good stores, and we hope will come out much better next spring than they did last. The past season was rather poor here, the bees gathering but little surplus honey.

C. A. GRAVES.

Birmingham, O., Dec. 22, 1881.

Bees On The Wing.—The season has been mild, so far, and my bees celebrated Christmas while on the wing, on Dec. 24 and 25, 1881.

WM. STOLLEY.

Grand Island, Neb., Dec. 27, 1881.

Mild Winter.—Will the continued warm sunshine we now have, and have had all the fall and winter, cause bees to consume more honey than if it were colder? Up to this time we have had no snow, except, perhaps, ½ an inch observable on sidewalks and fences one morning late in November. We have not had ice to exceed one inch in thickness and not more than ten mornings; days generally are clear and warm; bees fly almost every day; there is no danger of dysentery. A few days ago I heard a farmer say that he had some cherry blossoms; there is quite a difference between this and last winter, up to this time. We had 30 to 40 snows and everything froze up solid, and remained so until Feb. 1. Possibly our winter is yet to come. Bees are in good condition, and do not appear to be consuming but little honey.

D. W. BELLEMEY.

Vienna, Ill., Dec. 25, 1881.

[Yes; if the weather is cold enough to require artificial heat, and yet not so intense as to produce the semi-dormant state incident to extreme winter.—ED.]

That Cough Medicine.—Many people are probably not aware that much of the linseed oil, especially that termed boiled, is adulterated with poisoned drugs. Therefore, when doctors recommend it for medicine, as Dr. Tinker has, they should caution the public.

P. F. TWITCHELL.

Andover, O., Dec. 27, 1881.

Questions.—1. Can honey extractors be made so as to accommodate two different sized frames—Langstroth on one side of the comb basket, and a frame 11x12 on the other?

2. Where quilts are entirely covered with propolis, should they be used for winter coverings?

3. Where natural swarms repeatedly fly up from the alighting-board and settle again upon a limb, what is the best course to pursue? Nearly all my swarms troubled me in this way last summer, and sometimes they would go to the woods.

A. M. SANDERS.

[Yes; the Excelsior extractor, Nos. 3, 4 and 5, will accommodate Langstroth and American frames at the same time. Nearly all the approved patterns can be manufactured to carry combs of two sizes.

2. We would not advise their use.

3. Probably the best course to pursue is to clip off about half of one wing of the queen, and, if increase is wanted, hive them on a new stand; if no increase is desired, destroy the queen cells in the parent hive, clip the queen's wing, and return them.—ED.]

Bees in N. W. Michigan.—In accordance with Mr. Demaree's suggestion, I will say for northwestern Michigan, that bees went into winter quarters about the middle of November; had splendid flights Dec. 18, 25 and 26, and carried in water both days. The loss from my 19 colonies will not exceed a pint, while last year each colony had lost more than that. I have no fears for their safety.

GEO. E. HILTON.

Fremont Center, Mich., Dec. 30, 1881.

Mignonette.—I would like information on the following points: 1. What can I plant in my yard that my bees can feed on? I have ¾ of an acre of a black loam, rich and dry. I want something that will bloom the same season sown, and be ornamental at the same time. 2. What is the proper space between the bottom-bar of a frame and the bottom-board of the hive? 3. Will the distance make any difference in wintering? I am a beginner. I bought 4 colonies of black bees last spring, which have increased to 9, besides giving me 350 lbs. of extracted honey. All are in good shape for wintering, and have at least 20 lbs. of sealed honey each. I am the only one keeping bees in this town, and have no trouble in mating my queens. I cannot discuss bee matters with the scientists, but I have the comfort of reading the BEE JOURNAL weekly, and anxiously await each number.

A. MONTREVIL.

Walkerville, Ont.

[1. You can plant mammoth mignonette, sweet basil, and many other annuals with good ornamental effect and remunerative profit. This will also give opportunity for planting to advantage during the season with biennials and perennials.

2. Three-eighths of an inch is the proper space to allow between the bottom of the frame and the bottom board of the hive.

3. The space in the bottom will make no perceptible difference in wintering, unless, indeed, it should run to an extreme.—ED.]

Bees in Georgia.—DEAR EDITOR: Permit me to congratulate you for the successful accomplishment of the great task you have ventured upon—the establishing of a Weekly bee-paper. Now that you have conquered the initial difficulties, I trust that the path before you will be smooth. The past year has not been a prosperous one for the bee-keepers in this latitude. Indeed, the past summer and fall have been even more disastrous to them than the winter had been to the Northern bee-keepers; for, during the unprecedented drouth of 4 or 5 months' duration, the bee-forage absolutely failed, the queens stopped to lay, the colonies dwindled down, the invasions of the moths could not be checked, and thus most of the bee-keepers I know lost all their bees. I saved mine (kept in my garden in the city), only by the closest attention and watchfulness; but the colonies are now extremely weak. They, of course, did not afford any surplus honey during the past season.

L. KNORR.

Savanna, Ga., Dec. 23, 1881.

Poor Honey Season.—I was nearly discouraged last spring when I found 18 out of 20 colonies of bees had died. But I determined to try again and I bought 10 colonies, which I increased to 28, in good condition for winter. I got 335 lbs. of clover honey in 2 lb. sections. The season was a very poor one for honey in this county, the long drought cut the season very short. I sold all my honey at 25 cents per lb.

WM. B. MCCORMICK.
Uniontown, Pa., Dec. 5, 1881.

Sixty Colonies on Summer Stands.—I am pleased to know that the BEE JOURNAL is to have smaller pages in 1882. They are more convenient to preserve and handle. Every one who has 5 colonies should take the BEE JOURNAL. I have 60 colonies on the summer stands all in good condition. They had a flight on Dec. 14.

THOS. PIERCE.
Gansevoort, N. Y., Dec. 19, 1881.

Making Comb Foundation.—I had 30 colonies of bees in the fall of 1880 packed in chaff; all came out alive in the spring, 2 were queenless and 1 left the hive in April. They had no flight from Nov. 9 till March 6. I increased to 61, and extracted 2,500 lbs. of honey. All have plenty of good honey for winter and are in good condition, packed the same as last winter. I have tried all kinds of soap to make comb foundation with, but had little satisfaction. Last summer I used 1 lb. of honey mixed with one-fourth of water; it worked like a charm and needs no washing. We have a machine to even the sheets and roll them out 5 and 6 feet long. DAVID BYER.
Markham, Ont., Dec. 21, 1881.

Clock-Work.—Success to the BEE JOURNAL. After reading it for the past year, I have concluded that the editor is like the pendulum of a clock, steady, but right on the mark every time. While you conduct the BEE JOURNAL, Mr. Editor, and I keep bees, send it right along to

GEO. WILLIAMS.
Nashua, N. H., Dec. 17, 1881.

Packed in Chaff—Last spring I had 23 colonies; I increased them to 52, and extracted 2,900 lbs. of honey, and took 100 lbs. of comb honey, leaving them plenty of stores for winter. They are packed in chaff. I believe upward ventilation kills more bees than anything else. I always put the cap down tight with a sheet of paper under it, and put the hives under the chaff in a bin, with a heavy weight on the top of the chaff. The tightest one always winter the best

ARTHUR J. RUSSELL
Millbrook, Ont., Nov. 22, 1881.

Successful.—I cannot keep house without the BEE JOURNAL; put me down for a subscriber as long as I keep bees. I began taking the BEE JOURNAL with the first colony of bees, three years ago. I have had good success, which I owe in a great measure to the BEE JOURNAL. A. G. RYKERT.
Attica, N. Y. Dec. 24, 1881.

The New Races of Bees.—My bees are wintering well so far. I have not tried the new races, and unless I hear better reports about them, I think I shall let them alone. I can sell extracted honey at home for nearly as much as I can comb honey. ISAAC SHARP.
Waveland, Ind., Dec. 29, 1881.

Poor Bee Pasturage.—This is rather a poor location for bees; we depend on white clover, and that has failed for three seasons. I lost all my bees last winter except eight colonies, and they were very weak. I obtained no surplus, but increased to 31, and fed about 200 lbs. of granulated sugar, which gives them plenty for winter, but some are rather weak in bees.

WM. H. RAFTERY.
Pittsfield, Ill., Dec. 26, 1881.

Bees in Florida.—Perhaps a line from one of your readers, formerly of Salem, Ind., but now a sojourner in this land of flowers, would be of interest to your many readers. Bees can be kept here in any kind of a shell that will keep out the rain and sunshine, and feed them on anything sweet, except glucose—that curse to honey-producers. It is no trouble to winter bees here, if you leave them enough to eat, or will feed them sugar cane syrup, if they have not enough honey. Those keeping bees here say the orange is the best and first plentiful bloom giving them honey and building up their bees to swarming in March; but I think that for successful honey gathering here I would feed up my bees strong, so that I could get the surplus honey from orange bloom, which can be done, for it would be no task to have the colonies strong by the middle of February. Should I ever stop any season here I would try my hand at bee-keeping for our Northern trade. The weather is warm as our June is usually. We have had but one frost here this winter yet, and it is thought there will be no more. The thermometer on Christmas was 80° at noon.

JOHN CRAYCRAFT.
Waldo, Fla., Dec. 26, 1881.

Worth $50 a Year to Me.—Please send me the JOURNAL as long as you and I live. I have received it for 1881, and it was worth 25 times its subscription price to me.

SAMSON J. HOPKINS.
Evansville, Wis., Dec. 30, 1881.

Hybrids as Honey Gatherers.—I have 12 colonies of bees in winter quarters. I have kept bees for 10 years, and, seeing so many bad reports last winter from all over the country, I thought it my duty to report my success in wintering. During all my experience in bee-keeping I have lost only 1 colony, and that was 9 years ago. Last winter I had 7 colonies; all came through strong; they never were in better condition than last spring. My bees and myself were ready for the honey harvest. Apples and cherries yielded abundantly; next came white clover, but, to my disappointment, only for a few days. Dry weather set in and there was no more honey for us. My average crop per colony was about 30 lbs., all in 2 lb. sections. I have 3 colonies of Italians, but like my hybrids best, not for beauty, but for honey gathering. I sold all my honey at 25 cts. per lb.

C. H. NAGLE.
Allentown, Penn., Dec. 18, 1881.

Enthusiastic Appreciation.—I consider the BEE JOURNAL indispensable. I should be lost without its timely hints. Its Convention notes, containing the views of the master minds of the apiarian world, is enough to make the heart of the smaller apiarist leap for joy. Long live its editor, who fights so valiantly against glucose and adulterations generally. I have 28 colonies with blankets over the tops and ½ inch strips under. I will give the results in the spring. I keep feed in dry places for them every warm day, of which we have had many. The weather is warm and rainy.

G. W. ASHBY.
Valley Station, Ky., Dec. 28, 1881.

Home Market for Honey.—The weather is remarkably warm for the time of year. My bees are in cellar, and, to all appearance, are doing well. I leave the entrance below open, keep the room perfectly dark, and they are as still as mice. I have no fear as long as they have plenty of air below. I sell all my honey at 25 cents per lb. at Galva. It is in pound boxes with label on top of each section, as follows: "One pound of pure, unadulterated comb honey from the apiary of J. M. A. Miller." I find no trouble to sell all I have to spare at a good price with the above guarantee, and those who attempt to use my name to sell an inferior article at a reduced figure, are cut off.

J. M. A. MILLER.
Galva, Ill., Dec. 23, 1881.

[Yes; the way to succeed is to develop the home markets.—ED.]

What a Contrast.—A year ago, at a corresponding date, the earth was covered with deep snow; every stream and rivulet was frozen over, and the merry jingle of sleigh bells resounded over hill and dale. To-day the weather is as warm as a pleasant May day, and in place of the musical jingle of bells we had more animated and much sweeter music (to our ears) the humming of countless numbers of bees. So far this winter we have scarcely had ten days in succession when our bees were not flying one or more days. We feel quite safe now, should we get a cold snap for even six weeks. Our bees carried pollen to-day from rye and oats, chopped, placed in the yard for them. W. H. STOUT.
Pine Grove, Pa., Dec. 28, 1881.

Wintering Nicely.—I have 80 colonies of bees in chaff hives. They are wintering nicely, and had a flight every few days during the winter, so far. F. E. TOWNSEND.
Hubbardston, Mich., Dec. 29, 1881.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

RATES FOR ADVERTISING,

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance:

For **4** weeks..................**10** per cent. discount.
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" **26** " (6 months)....**50** " "
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Discount, for **1** year, in the Monthly alone, **25** per cent., payable in advance.

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Transient Advertisements payable in advance. —Yearly Contracts payable quarterly, in advance.

THOMAS G. NEWMAN,

974 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

How to get the Weekly Bee Journal free of cost for 1882.—Until further notice, any subscriber who desires to obtain a good book on apiculture, can have either Cook's Manual, Quinby's New Bee-Keeping, or Novice's A B C, bound in cloth, postpaid, and the Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, or Blessed Bees (a romance), bound in cloth, for $2.75. The JOURNAL and all five books for $6.00. This is a rare chance to get a good library on bee-keeping. A person can sell the books for their published price, $6.00, and get the Weekly BEE JOURNAL *free* for his trouble.

Those having already paid for the Weekly BEE JOURNAL for 1882 may send for the books alone and deduct the $2 already sent for the JOURNAL.

This offer will be withdrawn on January 10th.

Special Notice.—We send this number of the BEE JOURNAL to those of our subscribers for last year who have not yet sent on the money for 1882. Many of the renewals will be in transit in the mails, and those who have not yet started the money are hereby cordially invited to do so at once, or they will receive no more, unless we hear from them immediately.

We invite ALL to promptly renew, and save the unnecessary trouble of taking the names from our mail list, and having to replace them again in a few days. Promptness in this will save us much valuable time and perplexity.

Once in a while we receive a rather uncourteous letter because the BEE JOURNAL is discontinued when the time is out that has been paid for. We try to please all our subscribers, but it is not an easy task for us to determine who does and who does not want it so continued; so we must ask to be informed on the subject.

Now, if all who desire it continued would drop us a postal card, or mention it when they are sending a remittance, it would save us much trouble and themselves the annoyance of having the JOURNAL stopped.

☞Thousands have used Kendall's Spavin Cure for rheumatism after all other remedies had failed, and have experienced instant relief. 1w4t

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ Articles for publication must be written on a separate piece of paper from items of business.

To Promote a Vigorous Growth of the hair, use Parker's Hair Balsam. It restores the youthful color to gray hair, removes dandruff, and cures itching of the scalp. 1w4t

☞ When changing a postoffice address, mention the *old* as well as the new address.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

"How do You Manage," said a lady to her friend, "to appear so happy all the time?" "I always have Parker's Ginger Tonic handy," was the reply, "and thus keep myself and family in good health. When I am well I always feel good-natured." See other column. 1w4t

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise of less weight than 8 ounces. Canadians will please remember this when ordering Binders.

☞ Look at the wrapper label and see that proper credit is given for money sent us, within 2 weeks. If it does not then appear, please send us a Postal Card, and we shall with pleasure make the correction, for an error may occur during the rush at this season, though we endeavor to be careful to always give proper credit.

The Apiary Register will be ready to send out next week.

It devotes 2 pages to each colony, embracing between twenty and thirty headings, neatly ruled and printed, with space at bottom for remarks, and so arranged that a single glance will give a complete history of the colony. Each book will also contain printed rules for the apiary, and twelve pages ruled and printed for an apiary cash account. As each book is intended for a several years' record, it is gotten up on first class paper, and strongly bound in full leather covers. There will be three sizes, sent postpaid, at the following prices:

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start. We have added these to our new Premium List for getting up Clubs for the JOURNAL.

Honey and Beeswax Market.

BUYERS' QUOTATIONS.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Jan. 2, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

CHICAGO.

HONEY—The market is lively and prices steady. We quote light comb honey, in single comb boxes, 18@22c; in larger boxes 2c. less. Extracted 8@9c.

BEESWAX—Prime quality, 18@22c.

AL. H. NEWMAN, 972 W. Madison St.

NEW YORK.

HONEY—The supply is full, and trade is lively. We quote as follows: White comb, in small boxes, 18@22c; dark, in small boxes, 15@17c. Extracted, white, 10@11c.; dark, 8@9c.

BEESWAX.—Prime quality, 21½@23c.

THORN & CO., 11 and 13 Devoe avenue.

BOSTON.

HONEY.—1-pound combs are a desirable package in our market, and a large quantity could be sold at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

BALTIMORE.

HONEY.—But little on the market, and prices are not quoted.

BEESWAX.—Southern, pure, 21@23c.; Western, pure, 21@22c.; grease wax, 11c.—*Baltimore Market Journal.*

INDIANAPOLIS.

HONEY.—New, in 1 or 2 lb. sections, 22@25c.—*Indianapolis Stock Review.*

PHILADELPHIA.

HONEY.—The supply and demand are alike nominal.

BEESWAX—Best light 23@25c.—*Philadelphia Merchants' Guide.*

CLEVELAND.

HONEY—Comb honey has been a little dull for a week, but prices are unchanged. We sell best white 1 lb. sections at 22c.; 2d best, 20c., and dark 18c; 2 lb. sections, 17@20c. Extracted, 12c. in small packages; 11c. in half bbls.

BEESWAX—22@25c.

A. C. KENDEL, 115 Ontario Street.

ST. LOUIS.

HONEY—Plentiful and slow for all save choice bright comb—this sold readily; comb at 18@22c.; strained and extracted 9@11c. to 12½c.—top rates for choice bright in prime packages.

BEESWAX—Selling lightly at 19@20c.

R. C. GREER & CO., 117 N. Main Street.

SAN FRANCISCO.

HONEY—The southern boat this week brought 168 cases, principally comb. It is next to impossible to find buyers at current figures, except where a case or two is retailed to some small dealer. There would be no trouble in placing all offerings to wholesale buyers, if concessions were made, but this holders are endeavoring to avoid, at the same time being anxious to realize.

We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8¾@10c.; dark and candied, 7@8c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

CINCINNATI.

HONEY—Our honey trade is a little slow just now, perhaps because of the unfavorable weather; but it has been first-class. My sales during two weeks in the month of October amounted to 22,000 lbs. of extracted honey—more honey than I ever sold in two weeks before. About 15,000 lbs. of the above was sold by the barrel, and almost all the balance in our square pound jars, and all these latter, with the exception of about 10 gross, were sold in our city, partly in shipping orders and partly in crates for the trade. Pound glass jars are by far the handsomest retail packages. They do not sell in Chicago nor in New York because adulterators have spoiled the retail trade especially for extracted honey. They used glass jars. But I doubt very much whether I should have created a retail market for extracted honey with the same success had I not adopted the square glass jar. I adopted it because adulterators were using the round bottles. For 10 and 25 lb. packages nothing is handier than tin buckets, and I have a good trade for them from druggists, bakers, retail grocers, etc.

I pay 8@11c. for extracted honey on arrival, and 16@18c., for choice comb honey.

BEESWAX.—18@22c., on arrival. I have paid 25c. per lb. for choice lots. C. F. MUTH.

Bees for Sale.

I will sell **500 Colonies of Black Bees**, in Hives from one to three years old, to be delivered at depot at Albany, N. Y., as soon as May 1, 1882. I have had 15 years' experience in the bee business, and claim to know what constitutes a good colony. Persons wishing to buy will please write to **A. SNYDER**,
1wtf Clarksville, Albany Co., N. Y.

WANTED By a young man, a situation as APIARIST. Have had 7 years' experience in bee-keeping, and thoroughly understand the requirements of the business. Good references given. Address M. G. BEALS, East Hardwick, Vt.
1w1tp

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen	$4.50
2-frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1	2.50
" " per half doz., after July 1	13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,
1wtf Burlington, Iowa.

THE RURAL CANADIAN,
A Fortnightly Journal of
Agriculture, Horticulture and Rural Affairs.
Edited by W. F. CLARKE, and
Published at 5 Jordan street, Toronto, Ontario. Canada, at $1.00 a year, by C. Blackett Robinson. Liberal inducements to local agents. 44mtf

C. Olm's Comb Foundation Machine.
☞ Send for Sample and Circular.
18mtf **C. OLM**, Fond du Lac, Wis.

THE AMERICAN POULTRY JOURNAL,
Is a 32-page, beautifully Illustrated Monthly Magazin devoted to
POULTRY, PIGEONS AND PET STOCK
It has the largest corps of practical breeders as editor of any journal of its class in America, and is
THE FINEST POULTRY JOURNAL IN THE WORLD.
Volume 12 begins January 1881. SUBSCRIPTION:—$1.00 per year. Specimen Copy, 10 cents.
C. J. WARD, Editor and Proprietor.
182 CLARK ST., - CHICAGO

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. *Sells at Sight*, Double your money Address Dr. Chase's Printing House, Ann Arbor, Mich
36m1yp

SEEDS FOR
Honey Plants.

I keep at all times a full supply of Seeds for Honey Plants, including
Golden Honey Plant.
Melilot Clover,
White Clover.
Alsike Clover,
Mammoth Mignonette, &c.

Send for my catalogue which gives prices and instructions for planting—sent free upon application.

ALFRED H. NEWMAN,
972 West Madison St., CHICAGO, ILL.

ALFRED H. NEWMAN,
Dealer in all kinds of
APIARIAN SUPPLIES,
AND
HONEY AND BEESWAX,
974 West Madison Street,
CHICAGO, ILL.

MY ILLUSTRATED CATALOGUE
sent FREE upon application.

FLAT-BOTTOM
COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.
J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

See! See! See!
The Bee-Keepers' Exchange.

This journal begins its fourth year in a new dress, has been increased in size to 32 pages, is a live, progressive monthly, edited by practical bee-keepers, and is richly worth the subscription price, which is $1.00 per annum, postpaid, or three months on trial for 25 cents. Sample copy free. Our price list of Apiarian Supplies is now ready, and you will consult your best interests by securing a copy before you order. Address,
HOUCK & PEET,
1mtf Canajoharie, N. Y.

American Bee Journal
VOLUME FOR 1880,
Bound in paper covers. A few copies for sale at
$1.00, postpaid to any address.
THOMAS G. NEWMAN,
974 West Madison Street, Chicago, Ill.

Friends, if you are in any way interested in
BEES OR HONEY
We will with pleasure send you a sample copy of
Monthly Gleanings in Bee-Culture,
with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Artificial Comb, Section Honey Boxes**, all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address on a postal card, *written plainly*, to
A. I. ROOT, Medina, Ohio.

TIN PAILS FOR HONEY.

These Pails have a full cover, and are excellent for marketing Candied Honey. The gallon and half gallon pails have a bail or handle, the quarts and pints have none.

Assorted samples of the four sizes, put inside one another as a nest, price 50 cents. These pails are very useful for many other purposes, after being emptied of the honey by consumers. The following are the prices:

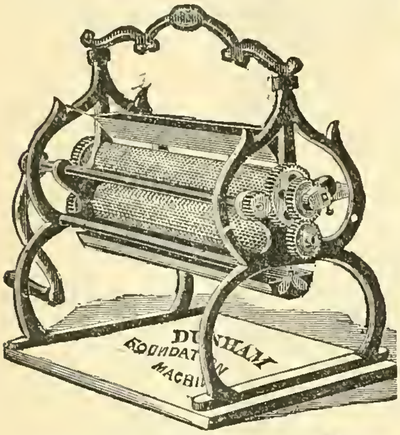
	Per Doz.	Per 100
Gallon, holding 10 lbs. of honey	$1.80	$12.00
Half Gallon, " 5 " "	1.50	9.00
Quart, " 2½ " "	1.20	7.00
Pint, " 1¼ " "	.75	4.00

COLORED LABELS.

I now have on hand two sizes of Colored Labels for these tin pails (one size for pints and quarts and another for half-gallons and gallons), and can supply any quantity of either size, by mail, postpaid, at 1 cent each. When 100 or more of either size is ordered, I will print your name and address on them without extra charge. Prices for larger quantities than 200 given upon application.

ALFRED H. NEWMAN,
972 West Madison Street, Chicago, Ill.

FRANCES DUNHAM,
Inventor and Sole Manufacturer of the



Dunham Foundation Mill,
Patented July 28th, 1881.
New Circular and Samples free.
1smtf FRANCES DUNHAM, DePere, Wis.

HIVES AND SECTIONS.

We are in better shape than ever to furnish Bee Hives and Sections, having remodeled our machinery, and put everything in tip-top order for the coming season. We make a specialty of our

"BOSS" ONE-PIECE SECTION.

We have not sold any rights to manufacture, therefore we are the sole manufacturers in the United States. Send for Price List.

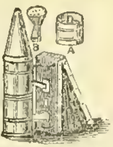
JAS. FORNCROOK & CO.
Watertown, Wis., Dec., 1881.

NOTICE—Some persons having infringed upon our Patent "One-Piece Section," we hereby give notice, that we shall prosecute all manufacturers. We shall not molest bee-keepers for USING those purchased before Dec. 1st, 1881, but hereby caution them against buying any except those bearing our stamp. It has been reported by some that it is our intention only to prosecute bee-keepers for using those One-Piece Sections heretofore purchased; this is wholly untrue and false.

JAS. FORNCROOK & CO.
Watertown, Wis., Dec. 15, 1881. 51smtf

Quinby's New Bee-Keeping.

QUINBY'S
NEW
BEE-KEEPING
BY MAIL
$1.50



If you desire the benefit of an experience which has enabled us to secure 32,809 lbs. of honey from 160 colonies of bees during the present season, send for our book. It contains 270 pages, with 100 illustrations, and is fully up to the times. Price, by mail, **$1.50.** We sell everything used in advanced bee-culture. Send for our illustrated circular.

L. C. ROOT & BRO.,
46smtf MOHAWK, NEW YORK.

READ THIS.
FIFTY YEARS AN APIARIST.

We are the oldest breeders of Italian bees and manufacturers of apiarian supplies in New England. Our experience dates back to the first experiments of Mr. Langstroth in the movable comb system. Send for our price list of bees, queens and supplies, before making your purchases for 1882. Address, **WM. W. CARY & SON.**
1mtf Coleraine, Franklin Co., Mass.

G. M. DOOLITTLE says our THIN VANDEVORT FOUNDATION stands one notch higher than natural comb, and beats all others. He has tried it. Send for samples and prices.
1w1t G. W. STANLEY & BRO., Wyoming, N. Y.

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Vol. XVIII. Chicago, Ill., January 11, 1882. No. 2.

Topics Presented This Week.

Editorial—

The Honey Crop of 1881 19
Items 20
Changes Among Bee Papers 20
Glucose–Grape Sugar 20
Notes from Sunland 20
Sweet Clover in Colorado 20
Competitive Apiaries 20
Mortality in Winter 20
Clubbing List for 1882 28

Among Our Exchanges—

Wax-Boiling in England 21
Glucose and the Michigan Convention 21
Signing Notes 21
Survival of the Fittest 21

Correspondence—

Yellow and Leather-Colored Bees 22
The Coming Bee again 22
A Talk on Sundry Bee Matters 23
  A Bee Company 23
  Jones' New Departure 23
  Doolittle's Cataloge 23
  Are there Too Many Bee Papers 24
  Bee Stings 24
  Bee Gloves 24
  L. C. Root & Bro.'s Report 24
  Bee-Keepers' Supplies 24
Peccadillos of Bee-Keepers 24
Pollen in the Hive in Winter 25
Drones and Drone-Workers 26
Damage done by Skunks to Bees 27

Convention Notes—

Local Convention Directory 27
Los Angeles County, Cal., Convention 27
Colorado State Convention 27
Convention Notices 28

Selections from Our Letter Box—

Removing Bees in Winter 29
Packed in Sawdust 29
Poor Summer for Bees 29
Taking a Notion to Bees 29
Bees and Grapes 29
Remedy for Ants 29
Report of the Season 29
Will Try Again 29
Cold Spell 29
Favorable Winter 29
Worth $5.00 to him 29
A Good Showing 29
Thymy 29
Remedy for Whooping-Cough 30
Queen Stopped Breeding 30
A Beginner 30
Preparing Bees for Winter 30
Production and Sale of Honey 30
Repairing Losses 30
A Good Honey Crop 30
Bees Doing Well 30
Linseed Oil as a Medicine 30
Queen Excluders 30

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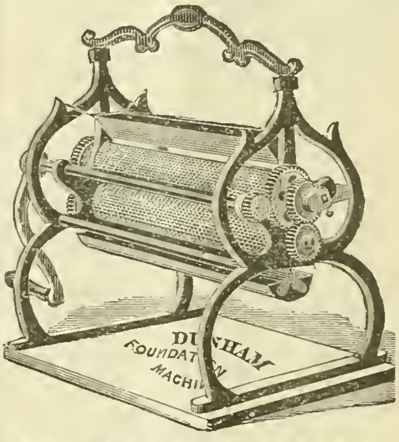

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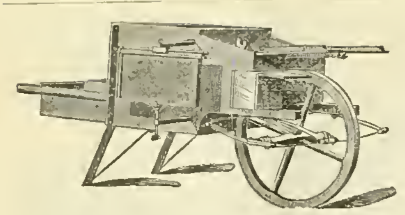

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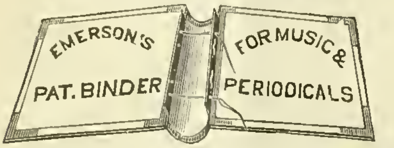

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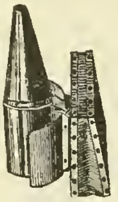

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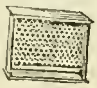

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CHICAGO, ILL., JAN. 11.

The Honey Crop for 1881.

Respecting the Table we gave in the Bee Journal for Oct. 12, of the Honey Crop of last season, Mr. W. Z. Hutchinson remarks as follows :

> Mr. C. N. Wilson, in the *Semi-Tropic California*, is certainly unfair in his criticisms of you and your “table of the honey harvest of 1881;” but are not you a trifle mistaken, when you say that friend Hasty bases his argument, in the *Bee-Keepers' Exchange*, on an error made by a compositor? Please read his criticism once more, and I think you will notice that he says: “Of course there is an arithmetical slip here, and the colossal sum is really the number of cents instead of the number of dollars.” Friend Hasty then says: “The question herein raised is this: Is not 100,000,000 (lbs.) much too large an amount to claim for this year's honey crop?” And in this I must say that I agree with friend Hasty, as you will see by the following article of mine in the *Country Gentleman* :
>
> Last September, the editor of the American Bee Journal requested his readers to send in reports of their honey crop. They responded promptly, and reports were received, showing the yield of honey from nearly a quarter of a million of colonies, or about 8 per cent. of all the bees in America. The average amount of surplus was about 69 pounds per colony, and the increase was about 71 per cent. In rare instances, as much as 400 pounds of comb honey were taken from a single colony. In the production of honey, New York took the lead, followed by Pennsylvania, Canada, Ohio, Michigan, Wisconsin, Illinois and Louisiana, in order named. California, so famous for its large yields, produced a very light crop. The editor remarked that, “if the one-twelfth that reported are a fair average of the whole, then the crop of American honey for 1881 amounts to 120,000,000 pounds! If we call it only 100,000,000, it is worth $15,000,000. Surely the industry is of sufficient magnitude to satisfy the most enthusiastic of its devotees.”
>
> In estimating the entire honey crop, from the reports received from 8 per cent. of the bees, the editor makes a reduction of one-sixth. In his enthusiasm, I fear that he did not sufficiently take into consideration the fact that the reports received were from the best educated and most progressive and successful apiarists of the country, and that a far different showing would have been made, had he received reports from an equal number of colonies kept in box-hives and log gums, and owned by ignorant bee-keepers. I do not consider myself competent to say just how much reduction should have been made, but I do certainly think that Mr. Newman has placed his estimate at too high a figure.

That we were *not* mistaken is fully proved by the following taken from the article in question by Mr. Hasty, as published in the *Exchange* for November :

> The finality of the report is that this year's honey crop is $1,500,000,000—three-quarters of the amount of the national debt! To consume it all in the United States each family of five persons would have to eat $150.00 worth. Of course, there is an arithmetical slip here, and the colossal sum is really the number of cents instead of the number of dollars. The number of pounds figured is but 120,000,000, and the 20,000,000 are thrown off to cover shortage.

If additional proof is required, we have it in Mr. Hasty's subsequent letter, in the *Exchange* for December, which is but just published :

> In my criticism on the Bee Journal's honey report, I mentioned, among other errors, the one by which the total value of the honey crop was made a hundred times more than its own figures would allow. I was not at the time aware, that the next issue of the Journal had contained a correction. Criticising typographical errors, already editorially corrected, would be rather petty business. Fortunately no argument was directed against these retracted figures, but whatever strictures the article contained, fell on the figures the Journal intended to give. E. E. Hasty.
>
> Richards, O., Dec. 21, 1881.

Now let us examine the argument against our editorial on the Honey Crop, which is as follows :

> The question herein raised is this: Is not 100,000,000 much too large an amount to claim for this year's honey crop? What we have sold and sure is the 9,467,622 pounds which are reported. The 100,000,000 are estimated from the smaller sum. Is it not building a pretty large structure on a comparatively small foundation?
>
> The estimate begins with putting the number of colonies in the country at 3,000,000. In the absence of data I will not dispute, but surely 10,000 hives to each congressional district looks a little large. The grand error is in making no adequate distinction betweem frame hives and box hives. The great majority of the bees in the country—say 2,000,000 colonies are still in primitive housings, and kept in let-alone style. To estimate the yield of these at about the same, hive for hive, as the yield of colonies in well kept apiaries is a flagrant inaccuracy.

Sufficient reply to this criticism is simply to repeat the exact words of the editorial in the Bee Journal for Oct. 12, page 321 which are as follows :

> There are in America about 3,000,000 colonies of bees, but our reports are from less than a quarter of a million, or one-twelfth of the whole. If the one-twelfth that are reported are a fair average of the whole, then the crop of American honey for 1881 amounts to 120,000,000 of pounds. If we call it only a hundred millions, it is worth $15,000,000. Surely the industry is of sufficient magnitude to satisfy the most enthusiastic of its devotees.

It should be remembered that this is but a closing paragraph, having no particular bearing on the “Table of the Honey Crop of 1881,” except to show that *if* the one-twelfth who had reported are a fair average of the whole, (which are roughly estimated at “*about* three millions of colonies of bees”), then the crop of American honey for 1881 amounts to 120,000,000 pounds.

It will be readily seen that we *asserted nothing*, basing all the calculation upon an “if”—and then to show that we did *not* regard the figures as at all *definite*, we threw off the small amount of *twenty million* pounds of honey, estimating the balance as worth fifteen millions of dollars. It would seem that we could hardly have been *more* indefinite in these casual remarks about the estimate of the whole Honey Crop of America.

If anyone thinks that twenty millions of pounds are not enough to “throw off to cover shortage” for the inexperienced and box hive men—(and very likely it should be more)—they are perfectly welcome to “throw off” twenty millions more, or two or three times that amount, and still the only point we made is sufficiently maintained; which was, that bee-keeping was an industry of sufficient magnitude to command attention!

Surely neither Mr. Hasty nor Mr. Hutchinson will dispute the latter and only point we made! In the light of these facts, have they not been criticising "a man of straw"—a creature of their own fancy?

Both of these gentleman have our thanks for the courteous manner in which they have criticised; it is just what we like. Let the argument be as *hard* as possible, and driven closely. All we ask is politeness and courtesy, and a desire to arrive at the truth. This should be the object of all discussion.

Changes among Bee Papers.

The *Bee-Keepers' Instructor* has been moved from Adelphi, O., to Somerset, Ky., and Mr. Thomas is making it one of the best of the monthlies. We are glad to notice this. It is the only bee-paper now published in the South, and it should receive a very liberal patronage, for it richly deserves it.

Mr. Nellis has sold the *Bee-Keepers' Exchange* to Houck & Peet, of Canajoharie, N. Y., who have improved it in many ways, and we hope will not only issue a good paper, but publish it *on time.*

The *American Bee-Keeper*, published in Missouri, has not put in an appearance since October. Has it ceased to exist?

The *New England Bee Journal* has not been received since November, and we fear has also succumbed to the inevitable.

The *Kansas Bee-Keeper* is to be enlarged to 20 pages, and the price changed to 60 cents a year, but it has not yet come to hand.

☞ *The Patron's Guide*, published at Boyd, Ky., has been enlarged, and the editor thus speaks of its prosperity: "Regardless of short crops, rain or winter's icy blasts, every mail is bringing renewals of subscriptions to the *Guide*, and many new names to be enrolled as members of our rapidly growing family."

☞ The *Western Rural* says: "Lizzie Cotton is again advertising his bee knowledge in some of the agricultural papers. Lizzie is a fraud of the male gender, and a newspaper office that does not know it, holds a great deal of stupidity."

A Sample Copy of the Weekly Bee Journal will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Glucose-Grape Sugar.

Novice, in *Gleanings in Bee-Culture* for January, says:

> May I suggest to friend Newman, that glucose contains a little larger per cent. of dextrine than does grape sugar, to preserve it in a liquid state, instead of "chemicals" being added to the latter to make it solid? We shall get at the truth after awhile, if we are only patient.

The truth was gotten at long ago—and this is its sum and substance: Novice has been driven *nolens volens* from every position he has taken advocating the use of the vile trash for feeding bees, etc., and all that is left for him now, is—*jeu de mots*—a play upon words. We have neither the time nor disposition to follow up a *mere* quibble, and "for the present" we leave him to extricate himself from the "web" he has himself woven, as quoted in the Bee Journal for Nov. 16. It would have saved him much trouble, had he confessed the truth at first, and not tried to cover up his record, by asserting that we had come over to his position.

Competitive Apiaries.—The British Bee-Keepers' Society intend to offer a $100 prize "for the best managed and most profitable apiary, to be worked with a limited number of hives, upon any principle or combination of principles." England is waking up to the importance of the industry, and is doing good work in the line of progress.

☞ It would save us much trouble, if all would be particular to give their post office address and name, when writing to this office. We have letters (some inclosing money) that have no name, post-office, County or State.—Also, if you live near one postoffice and get your mail at another, be sure to give the address we have on our list.

☞ We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal for 1882. The next few weeks are the time to do this. We hope every subscriber will do his or her best to double our list for 1882.

☞ Single copies of the Journal sent postage paid for 5 cents each.

Sweet Clover in Colorado.—By reference to the minutes of the Colorado Bee-Keepers' Convention, on page 27, it will be observed that President D. S. Grimes made the most satisfactory report given in the Convention—one which will bear comparison with the most flattering reports anywhere. Mr. G. commenced the season with 15 colonies, obtained 2,000 lbs. of surplus honey, increased to 33 colonies all in good condition, and has 1,000 lbs. of honey in combs put away for spring use. As an explanation of his good success, Mr. Grimes said he had 75 acres of sweet clover pasture on which his bees foraged, and which we presume had been planted solely in view of its value for cattle pasturage. Sweet clover will undoubtedly become as great a favorite with stockmen as it is destined to become with apiarists, not only on account of its adaptability to all soils and latitudes, even where other clovers will not thrive, but also because of its superior nutritive qualities and ability to withstand water or drouth.

Mortality in Winter.—In reference to this subject we have received the following letter, just as the Bee Journal is ready for the press:

> Friend Newman:—Since writing my last, I am convinced that it will pay any bee-keeper to go hundreds of miles to hear Mr. Betsinger on what he has to say about "the cause and prevention of the great mortality with our bees during winter." Mr. B. has devoted a large share of the past season, besides spending much time and money in his investigations and researches, and I trust we shall have a large attendance of our principal apiarists which would help to settle this perplexing question. Our Association will be pleased, and under obligations to your Journal, if you will call special attention to the above fact. Geo. W. House.
>
> Fayetteville, N. Y., Jan. 6, 1882.

We have received the programme of the above Convention. There will be 7 sessions, covering 3 days. We have a special invitation to be present, but cannot then leave the office, or we should be glad to again meet the bee-keepers of New York.

Notes from Sunland, on the Manatee River, Gulf Coast of Southern Florida.—This is the title of a neat pamphlet of 84 pages by S. C. Upham, Braidentown, Fla. Anyone desiring to know anything of the climate, soil and productions of that region should send him 25 cents for this little book.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Wax Boiling in England.—Mr. A. Pettigrew, in the London *Journal of Horticulture*, gives the following details:

Boiling wax and preparing it for the market is very disagreeable work. All bee-keepers with their wives and servants dislike this work exceedingly, and none dislike it more than we do. Melted wax is easily cooled, and when cooling cleaves to everything it touches, and it is difficult to remove. Combs before being melted are bulky, and therefore have to be compressed before they are placed into a copper to be boiled. When the wax begins melting the pollen of the combs is liberated and mixes with the water in the copper or boiler. There is great difficulty in separating the melted wax from the pollen. Our plan has been to place the compressed combs in a bag of cheese-cloth and boil them, skim off the melted wax and run it through a strainer or a piece of muslin. But we have never been satisfied with this mode of melting wax. It is troublesome work. After the cakes of wax have cooled some pollen slightly mixed with wax adheres to their under sides, which is scraped off, the cakes being again boiled in clean water and run through a cloth into dishes half filled with clean cold water. We obtain thus wax as pure as it is possible to take it. By running the wax into cold water at the last time of boiling the bottom of the cakes appear to advantage, and look as if they had been moulded. The bottom of our cakes of wax look better than the upper surface, owing to the cold water freezing the wax into various forms as soon as they meet.

Some years ago a bee-keeper at Wigan told the readers of this journal that this plan of taking wax is too slow and troublesome, and that he had invented another which is easier and better. His plan or mode commended itself to me at the time, but owing to the smallness of our kitchen oven I have never put it to the test of experiment. His plan, if I remember rightly, is to melt the combs in a dry heat by putting them into a wire sieve or strainer or colander, and placing this in an oven sufficiently warm to melt the wax, and over a dish to receive the melted wax as it escapes from the pollen. This appears to me to be a very feasible mode of melting wax, and easier than the one we have followed for so many years.

Another mode of taking wax—probably the best invented—was carried into execution in Bowdon a short time ago. A lady obtained a great boxful of honeycombs; she first took the honey cleanly from the combs, then commenced in a novel manner to manufacture the wax. Instead of taking the wax from the pollen and rubbish, she took the pollen from the wax by washing it in clean water. Then she boiled the wax and poured it into a dish without using a filter. She brought the wax to me to sell for her, which I did at 2*s*. per lb., and I have never seen better or cleaner wax. This plan makes wax-taking comparatively easy and pleasant.

* * *

Glucose and the Michigan State Bee-Keepers' Convention.—The Dowagiac *Times* gives the following account of Dr Kellogg's lecture on Honey Adulteration with Glucose :

An excellent dessert to the general feast was dished up by Dr. Kellogg, of the Sanitarium. Doctor K. is a young man of far more than ordinary natural abilities, in addition to having a finished medical and chemical education. His subject was "Honey as Food." The Doctor dwelt at length upon the use of sweets to the human system; spoke very highly of honey as one of those sweets.

The subject of adulteration of sweets naturally came up, and was discussed at length, many questions being asked by the audience. Glucose (a syrup or sugar made from starch, by a sulphuric acid treatment) he had found to be the one adulterant used in the honey, syrup, and sugars of commerce. Glucose is made from corn (that being the cheapest starchy substance), though it can be, and has been, made of potatoes, grapes, wheat, rye, saw dust, old rags, or anything that will produce starch. He told how much had been made from an old shirt, but had no fears of any contact with shirt glucose, as the great bulk was, from economy, made of corn. Thousands of bushels of corn is used daily by the Buffalo factory. Other factories are springing up all over the United States. France and Germany are parents of the manufacture. Much is used in making beer.

Grape sugar is glucose granulated by a secret process unknown to classical chemistry, and kept secret by the manufacturers. On being asked of the prevalence and effect of adulteration by glucose and grape sugar, Dr. K. said it was almost impossible to find a sample of syrup that was not a large proportion glucose; that soft sugars were also badly mixed. He recommended the purchase of granulated or confectioners' A sugar as the only ones safe against adulteration. They had trouble in getting pure syrups at the Sanitarium. The dealers were unable to get it. Samples of liquid honey that he had analyzed was found badly mixed. They had all been put up by dealers in the large cities. He had no idea that producers adulterated honey, though he had read that a mixture could be put into combs and capped over artificially. This caused hearty and prolonged laughter.

Prof. Cook (professor of entomology, of our State agricultural college), arose and said that he had read the same thing, but every man of any experience with bees or honey of course knew better; that no human being could fabricate even the most bungling imitation of honey comb filled and capped over.

Dr. Kellogg then said that he had no fears of comb honey being adulterated by any one, nor of any honey being adulterated by the producers. These producers have got a state law enacted making the adulteration of honey a fine of $100. He gave it as his opinion that sufficient quantities of free sulphuric acid, or lime, or oxide of iron, or all, were to be found in glucose, or syrups mixed with it, to be unwholesome to the human system. Besides, it was a great cheat, because the sweet was only about ¼ or ⅓ as great as that of cane sugar.

An elderly physician in the audience (Dr. Whiting) arose and said we are finding new and dangerous symptoms with our patients, that by inquiry and the symptomatology point directly to the free use of commercial syrups."

* * *

Signing Notes.—In the Dowagiac, Mich., *Times*, "J. H." (eddon) gives the following advice on this subject:

"Say, John, I want to ask a favor of an old friend, I need one thousand dollars bad just now, and the bank wants a signer. I can pay it easily enough in 30 days. It wont even trouble you."

"Well Harry, I would like to do you a favor any time, but read this," (taking a paper from his wallet that reads as follows):

TO MY BEST FRIENDS.—The following is a copy of a "pledge" I have given to my wife:

"Whereas, you have practiced industry, economy and self-denial, to aid in the accumulation of the little we now possess, making your interest and rightful ownership the same as my own, therefore, I promise you that I will not so far usurp your rights and those of your children, as to hazzard our accumulations by signing any obligations with any person whomsoever."

"I trust your reason will approve of, and your friendship excuse my necessary refusal."

How strange it is that bankers with their vast experience can't trust John's "30 days," when they "can pay it sure" so easily? Readers cut out this "pledge," sign it, and when a friend asks you to sign an obligation that you do not wish to, show it to him, and after he reads it, if he is a friend worth having, he will be a friend still.

* * *

Survival of the Fittest.—The Canadian *Farmer*, says:

The bee-keeper who seeks to grasp the ideal bee by his own culture, must take no stock in the absurd doctrine of the "survival of the fittest." What has been done by stock-breeders has been accomplished by a most careful system of selection and management, backed up by untiring industry and perseverance.

* * *

☞ It will pay to devote a few hours in getting up a club for the BEE JOURNAL. Read the list of premiums on another page.

CORRESPONDENCE

For the American Bee Journal.

Yellow and Leather-Colored Bees.

CHAS. DADANT.

In the Bee Journal for Nov. 23, Mr. Demaree is yet arguing his favorite plea in favor of the yellow bee.

The first Italian queen that I introduced in my apiary was yellow to the tip of her abdomen. Her workers were as yellow as could be desired. This queen was the daughter of a queen imported from the apiary of the celebrated German, Dzierzon, whose strain of bees will never be excelled as to color; Dr. Dzierzon, for more than 20 years previous, having bred in view of improvement in color.

The progeny of this queen produced workers which had, most of them, the three yellow bands perfectly visible; most of their colonies had not a single black bee. Yet these workers were but half Italian, for, at that time, there was not another Italian queen within fifty miles of Hamilton, and, as I had worried my colony by rearing queens, I had not a single drone, and my young queens had all mated with black drones.

The following year I received three queens from Italy. Of course, I was far from being satisfied with these queens. They were dark, and their progeny was also darker even than the ill-mated queens.

Then I began to think that the color was not a sure test of purity, and, after a careful study, I proclaimed that the quietness of the bees on the combs, when they are taken out of the hives, is the surest test; this quietness being in direct ratio with the purity of the Italian bees.

Several bee-keepers pretend that the Italian bee is not a pure race; others, that it is the result of a mixture of Cyprian and black bees. If such be the case, let me ask, how is it that such an union has produced, in the offspring, a behavior so different from that of both the parents?

The Cyprian queens, when you open their hives, flee out of sight; their workers are disturbed and run everywhere, ready to fight. The black queens and bees act about the same, with the exception that the workers gather under the combs, and fall to the ground. The Italian queens, on the contrary, remain quiet, and every worker sticks to the combs undisturbed.

In writing of me, and of my bees, Mr. Demaree says that "some people" may suspect that the wonderful power of selfishness can move the best of men. Several times I have argued for the leather-colored Italian bee. My preference was based on facts, observed by myself and by perhaps 100 or more customers, who had made, as I did, the comparison between both races, and who prefer, as I do, the leather to the light-colored bee. After reading the article of Mr. Demaree, James Heddon sent me the letter given hereafter. Mr. Hedden cannot be accused of being moved by selfishness:

"Dowagiac, Mich., Nov. 23, 1881.

"Friend Dadant: I have just read the ably written article of Mr. Demaree, and while I admire his outspoken, earnest manner, I must say that all my experience with different races and strains of bees convince me that he is wrong. I bought many queens (over 70 in all) of Grimm, Alley, W. J. Davis, and others, of the "pure" golden, three-banded bees, and yet I wrote "the Italian bees are not superior to the Germans" of my apiary, all things considered. Finally, Mr. Oatman asked me if I had ever tried the leather-colored Italians. He evidently thought them a distinct strain, and said they would change my views upon the subject. I thought then, as I do now, that Mr. O., having been an extensive breeder, held opinions of worth, and I, then starting a second apiary, purchased 25 colonies and some queens from him, and put them in my new apiary, with some colonies of bright golden Italians. Their marked superiority over any bees I had ever seen induced me to supersede all my bright queens with those reared from the long leather-colored ones. I found no trouble in discovering traces of blood from the bright Italians, both by looks and actions, for the next 2 or 3 years. That fact convinced me that they were, to say the least, a separate strain. I wrote to Mr. Davis (who stood then as now high in my estimation), telling him all about the superiority of these Oatman bees over those purchased of him and others. I have reason to believe that this letter found him in a position to welcome something different in the line of blood, and though he had at that time one of the purest apiaries in America, I think that he superseded it with something he considers, after years of use, much better. I should not be much surprised if that is not the leather-colored Italians, or them and some other blood carefully handled. I hope to hear from Mr. Davis upon the subject. I write you because I am quite positive that Mr. Oatman told me that he obtained his leather-colored strain of bees from you, out of one of your importations. That I have so handled this strain of bees that they are better, rather than poorer, than when I obtained them, I have no doubt. That you, Mr. W. J. Davis, and numerous others are doing the same thing I have also no doubt. My opinion is, if we breed for color, we shall move backward; if for traits, forward; if for both at the same time, our movements will be slow in any direction."

Mr. Demaree, who says that he takes a broader view of the subject than I can comprehend, makes sport of my remark that, as he never bought a queen from me, he cannot know how our bees are. If I made such a remark, it is because Mr. D., in the Bee Journal for Sept. 14th, wrote about my "gentle dark Italians," saying that if he wanted to breed a game race of bees, he would commence by crossing the Cyprian with "Mr. Dadant's dark Italians," the robust Cyprian mixed with "these ferocious dark hybrids," etc. Now, unable to sustain his position about the ferocious temper of the leather-colored bees, Mr. Demaree says that in writing this article his intention was to joke and worry me. If so, the joking power of Mr. Demaree is not very varied, for, on several occasions, he made thrusts against the dark Italians, accusing them of being full of vindictiveness, and always ready to fight. Such accusations only show that he never has seen the worker progeny of a queen imported from Italy.

With Mr. Heddon, I think that it will be very difficult to produce an uniform type of bees, with all the best qualities, and worthy of the name of the "American bee." There are several sides to this question, the color of the bees being only one of them, and not, to my mind, the most important.

Hamilton, Ill.

For the American Bee Journal.

The Coming Bee, again.

H. L. JEFFREY.

The above heading seems to have been talked of at every convenient gathering of apiarists. It has been used for the subject of articles from the ablest apicultural writers of the day, and how much nearer the goal are we, either in the attainment of our wished-for bee, or in the elucidation of the *modus operandi* for obtaining her? One gives one method, another, or I might say all the rest, differ with the first and each other in the majority of points of working to attain the desired results. and yet all agree on the point that we must breed from our best queens, or in other words, from the queens of the colonies giving us the best results. Then follows what we may expect to get by working in such a channel, or perhaps the *modus operandi* of work or management according to A, B, C or D's ideas, and we follow it up, but we must not inbreed at all, and still we must keep getting queens from our most successful honey producing apiarists, and next, or first, we must have only pure drones, or must raise drones from our best stock, then comes a diverge. "There is the uncontrollable drone" to mate with.

Now, and first, if we are to get our drones from our best queens, or if we are to raise our queens from our best queen, it makes but little difference which way (on paper without trial), but one thing is sure, our breeding colonies have got to be the best to be obtained, either at home or abroad, if success is ever expected in the shape of perfection of the bee of the future. But when A, B, C or D claim it is to come from this or that hybrid stock, they are talking a great deal luny; it may be a commingling of races, but it will be a thoroughbred bee and cannot be a chance hybrid. It has been proved by hundreds of thousands of experiments that hybridism is a sure road to dissatisfaction, and I know of a number that have tried to work from a hybrid-stock starting-point, and they have always given up with evidence that they would result in a strong tendency to show apparent purity in offspring of both the original parents, and that after several successive generations. And like results will positively settle the hybrid starting-point.

That bees cannot be manipulated like other kinds of stock is an error. That they are not governed by the same laws as other stock is an error; and that there are not governing laws that are particularly their own is positively true and beyond question, as every observing, practical bee-keeper knows, and those laws are, without doubt, elastic enough to be manipulative to a practicable extent.

One question right here is, who is going to give us the perfect bee? How are they going to obtain it? When are we to have it? And where from will we get it?

I have been reading all that I could get hold of that has been written, and, like many others, have gained but a dim light on the subject, except that some think it will be a three or four banded bee.

Friend Newman (I say friend because you are a friend to us all), cannot you possibly sift this subject out so as to give us the fine flour and positive and concise rules to work by, and report results to you for a summing-up or comparison?

I do not know what others are doing, or just how they are working, or in what points they are succeeding; but one thing I feel very sure of, they are either succeeding blindly without knowing how, or they don't and won't tell us the whole in plain language.

Another point I am sure of, we may think we know what to expect from the queen, but we expect more than we get, and we get some things that are accounted for most mistakably, or else apiculture, as it is, is a wrongly taught and practiced science.

When Mr. Theo. Peet wrote some time ago that the drone was an important factor, he wrote a good deal of overlooked truth and no foolish poetry.

At the present day, we are obliged to swallow that detestable Dzierzon theory, or disbelieve our own eyes. Now we will acknowledge it true, and on that ground ask some questions: If we have an extra good colony for honey qualities, which is to have the credit, the queen or the drone she mated with? If the queen, why don't we get the same from her daughter's progeny? If from the drone, why not from the workers of the queen he mates with (the queens and drones coming from the same stock)?

Will some one answer the following questions fully in the Bee Journal, and give us a chance to sift out the fine flour?

What relation is a drone raised by a queen to the drone her mother mated with?

What relation to the drone she mates with?

What relation to her princess?

What relation is he to her (the queen laying the eggs)?

And what relation is the mating drone to the queen's princesses and workers?

I am sure all of the above questions, or their correct answers, are of just as much need to be considered as the qualities of prolificness, gentleness, great honey gathering propensities, or any amount of color or bands, and, by a thorough understanding of their proper answers, rules will be seen, which, if followed, will give all the graces called for.

Perhaps some of the readers of the Bee Journal think I had better finish up that foul brood and the desicated brood question. I will, but I wish to wait till spring and know for sure if my past experiments prove true. I shall send specimens of it to Prof. A. J. Cook again as early as practical, and to the editor, with condensed report of observations at the earliest opportunity.

Woodbury, Conn.

[Referring to the above suggestion relative to laying down concise rules to be observed in breeding for the "coming bee," we certainly cannot arrogate to ourselves the wisdom to do so. If Mr. Jeffrey will reflect, that thousands of intelligent bee-keepers in America are deeply interested in the improvement of their bees, it would seem inexcusable egotism for us to make suggestions, especially when decided and perceptible improvements have already been accomplished. While one may be slowly, but surely, approaching the summit in a round-about course, another, with more comprehension but less patience, may reach it by a shorter route. We can hardly guess when the result will be reached, but that it will be attained we cannot doubt; and perhaps sooner than many anticipate.—Ed.]

For the American Bee Journal.

A Talk on Sundry Bee Matters.

WM. F. CLARKE.

I often feel disposed to write on a variety of bee-keeping topics in a free-and-easy, chit-chatty sort of way, dispensing with all the formalities of a set article or editorial. Whether this sort of thing will interest the readers of the American Bee Journal, or be voted a bore, I do not know, but shall probably find out after the present lucubration sees the light. We are constantly trying experiments with bees, and it may not be amiss now and then to try one with bee-keepers. "So, here goes."

A BEE COMPANY.

We have organized a company in this town, and started an apiary as a tentative business venture. Money is plenty at six per cent. and some of us think we can pay all expenses and declare a dividend of 10 per cent. every six months. If this can be done in connection with a legitimate industry, will it not be preferable to shaving notes and squeezing debtors? Thus far, we have only bought 44 hives of bees, being the sum total of that nice little apiary at Kincardine, with which I fell so desperately in love last July, and of which I wrote a brief account for the Bee Journal. Mr. Sturgeon, the owner of it, had either to give up his business or part with his apiary, and very reluctantly concluded to do the latter. He, however, reserved 2 or 3 colonies, having come to such a pass that he cannot live without bees. Twenty-seven of our colonies are in double chaff hives, made after a pattern obtained from A. I. Root. The remaining 17 are in the common Simplicity hive. We had outside cases made for these of planed lumber, at a cost of 65 cents each. They look nearly, if not quite as well as the others, and don't cost one-fourth the amount. The cases are six inches larger every way than the Simplicity hive, and the space is filled in with chaff. I never handled a double chaff hive until last summer, and found one serious objection to it: The permanent upper story is very inconvenient for the elbows in taking out and putting in frames. It also necessitates a great deal of stooping, whereas with the single hive, you can sit down on a stool or box, and take solid comfort while exploring the condition of a colony.

JONES' NEW DEPARTURE.

Jones has become an editor. He is conducting a bee department for the *Montreal Witness*, a paper I have long written for, but from which I retire January 1, in order to give my best attention to the *Rural Canadian*, which has been kindly noticed in the Bee Journal, and will, of course, have a bee department of its own. Jones makes a very good fist of it as a beginner, and it strikes me that many practical bee-keepers might do good service to the cause of apiculture, and help their own business, by running bee departments in their local newspapers.

DOOLITTLE'S CATALOGUE.

"I arise" to state that I have received the above, and like it very much. It is the neatest and most tasty thing of the kind in my collection of bee-keepers' catalogues. For the most part, it is well written. But friend D., like the majority of those who write on apiculture, uses "the plural of majesty," and it sometimes reads queerly. "We had desired to have a little friendly talk with you about bees and bee-keeping, etc., etc., but owing to sickness * * * I shall have to be brief." "We hold ourself personally responsible," etc. I think we had better, all of us, give up this form of expression, and come down from our majestic stilts to Quaker plainness of speech. Only the "big man" who really fills the editorial chair, has a right to use the magnificent "We, Us & Company," anyhow. Correspondents and advertisers, unless a firm, should use the singular, and indeed, as will be seen by the above quotations, cannot write good grammar unless they do. I am particularly pleased with that part of Doolittle's circular which relates to the culture of small fruits. Being an enthusiast in that line myself, I cordially second the advice to bee-keepers that they combine apiculture and small fruit culture.

ARE THERE TOO MANY BEE PAPERS?

I am inclined to think so. Doolittle's club list enumerates "NINE in the United States for 1882." I didn't know there were so many, and I am sure I cannot find time to read them all. It's a delicate matter to touch upon, and reminds me of a question once put to a graduating theological student, "which are the minor prophets?" He replied that "he didn't like to say,as the answer might seem invidious." Mrs. Partington, says, "comparisons are odorous," but really, some of the bee publications in quality of paper, typographical execution, and editorial ability, are no credit to us. They are like weak colonies of bees,—haven't honey enough to winter well, and ought to be united to stronger colonies. Whether we can be overstocked with bees or not is a question much discussed. I raise the inquiry, whether it is not possible to be over-stocked with bee papers. I think it is.

BEE STINGS.

There have been a number of references to the above subject in the bee publications during the past few months. Professor Cook, very high authority, maintains that by successive inoculations with bee poison, it becomes a matter of indifference whether you get stung or not. Mrs. Harrison, our queen bee-keeper, eulogizes bee-stinging as a cure for rheumatism and the dropsy. I am sorry to be obliged to take issue with such eminent persons, but my experience contradicts them both. The older I get,the worse I suffer from a bee-sting. It has never done my rheumatism a mite of good, but on the contrary, gives me the worst kind of rheumatism, and as for dropsy, it always makes me very dropsical, especially about the eyes. In the September, 1873, BEE JOURNAL, I gave an account of "a curious and painful experience," with a bee-sting in the center of the upper lip. Well, strange to say, during the past summer, everything I got in any part of the body, centered both as to pain and swelling in the upper lip. A hard lump, the size of a marble, invariably formed in the center of that upper lip, and from it the pain and inflammation radiated all over my body, and specially affected the head. Mentioning these facts to the editor of the BEE JOURNAL in October last, all the comfort I got was that I ought to let bees alone. That is morally impossible.

BEE GLOVES.

I had great satisfaction last summer in the use of a pair of bee gloves, which I cannot claim to have invented, for they grew out of some suggestions I read in one of the BEE JOURNALS. They were made of canton flannal, or rather a species of soft crash towelling, covered with a very fine quality of brown linen. Gauntlets would be a more proper name for them than gloves, as they are long enough to lap over the coat cuff, which they grasp with a bit of elastic. After putting them on, I soaked them with cold water, which rendered them cool and pleasant to the hands, and made the bees, even when somewhat excited, indisposed to settle on them. for they are dainty little creatures, and don't like to damp their feet. They couldn't sting through them, and being wet, didn't want to. After trying rubber gloves, woolen mits with a forefinger in them, and sheepskin thistle mits of the same shape, I give these the decided preference. They were nicely made at our glove factory here, and only cost, material and workmanship, about 75c.

L. C. ROOT & BRO.'S REPORT.

This is a very interesting document, and should be carefully studied by all bee-keepers. I do not remember to have seen it in the BEE JOURNAL,* but it is well worthy of a place there, and indeed, in all the bee papers.

BEE-KEEPERS' SUPPLIES.

We, here in Canada, labor under serious disadvantages in regard to the above. Duty and express charges come so high as practically to banish us from the United States market, and this may explain to dealers why they get so few orders from this side of the lines. Many of our bee-keepers worry along with rude appliances, because they cannot afford to import better. Our people are not so ingenious and enterprising as the Americans, nor is there a brisk enough competition here to give us a choice of the best articles. D. A. Jones is doing something to supply this lack, and I just received a nice sample section-box from M. Ramer, of Cedar Grove. We shall doubtless get over this difficulty in time, but there are many things we should order if it were not for custom-house dues, post-office regulations, and express charges. I hope our brother and sister bee-keepers, will "to a man" use their influence to bring about Reciprocity between Canada and the United States. The bars and restrictions that now exist, are too oppressive to be tolerated much longer. Nor will dry jokes about annexation help the matter, for the more that is said on that subject, the less will our Government be disposed to relax. We want free commercial and social intercourse and interchange, let our political relations be what they may.

Listowel, Dec. 15, 1880.

[*Published Dec. 17, p. 388, BEE JOURNAL.—ED.]

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Translated by A. R. Kohnke.

Peccadillos of Bee-Keepers.

The following is an abstract of a lecture delivered by Mr. Kaestner, as found in the *Deutscher Bienenfreund*. Peccadillos of the bee-keeper. What a terrible word. But let us classify them according to the degree of knowledge a man may have of the science of bee-keeping, as peccadillos of the apprentice, of the journeyman and of the master.

Enthusiasm in apiculture may in certain cases be considered as a very contagious desease. Let any person wholly unacquainted with bees and their care, get into the company of enthusiastic bee-keepers, and he will be most likely to catch it. For the sake of brevity we will assume Mr. Roe is the infected person. He forthwith concludes to become a bee-keeper,—no, not that, but an—apiculturist, who will manage his bee on the most approved plans, because honey tastes pleasant, and he has an imaginary sight of a bursting pocketbook, stuffed with the proceeds of honey sold. Hives are cheap and easy to be had. but whether they are of the best style, face toward a proper direction on the surrounding country, is especially favorable to bee-keeping, are minor considerations. This would-be bee-keeper thinks the bee must get the honey. The advice of an experienced bee-master would be very valuable to him and save trouble and expense. But never mind the expense; our friend Roe knows how to hold a saw and handle a plane. His cleverness and economy will produce a hive excelling every other, except probably in accuracy.

The bees must be bought, but "cheap" is the watchword. In spring one or more colonies are bought; they will, they *must*, swarm; if not, he can "divide" them. Sure enough, spring favors his expectations; his bees swarm; some are large, some rather small swarms, but he accepts them all, hiving each one by itself; other colonies he divides; for his apiary must be stocked; his hives must be filled.

If the season is not a very favorable one, what will be the consequences of such thoughtless work for increase? Colonies will be weak and light in stores in the fall, starve during the winter and next spring finds Mr. Roe minus bees, who blames the "new fangled notion" of frame hives and "other traps;" his grandfather had bees, too, as he remembers, but had them in gums and old nail kegs, and he had always plenty of honey.

He finally comforts himself with the idea that "everybody must pay his apprentice" and he begins anew. This time he is a little more careful. But a visit to his apiary, to observe how he handles his bees, how he wants to induce swarming bees to settle by gun-shots and the drumming of tin pans, will prove that he always will remain an apprentice; his faults and peccadillos are on the increase. To inform himself of the subject of apiculture by reading standard authors or the BEE JOURNAL, he considers time and money thrown away. And, after a year or two, his hives are as empty as before, and mice and spiders have taken their abode in them.

But supposing it is not quite so bad; if Mr. Roe manages to avoid many mistakes, he wants to become a journeyman bee-keeper; he is a member of a bee-keepers' association, attends the meetings, reads books and papers an apiculture, and observes how masters in the business manage their bees. Very soon he thinks he knows it all, and is ready to prove it. He has yet some colonies in box hives, which are no ornament in his apiary; these must be transferred; he had read in a bee book that that may be done at any time in the year, provided it is warm enough for the bees to fly. So he goes to work at the end of April or in May and transfers; how he cuts and slashes; it is fun to look on; by much patching and propping he manages to fill 5 or 6 frames; the remainder of the old comb does not fit anywhere; especially those having honey are too thick. After a few days the weather turns cold, brood gets chilled, not being put compactly in the frames and convenient enough for the bees to cover; stores are scanty, forage not yet very plenty; result—weak or starving colonies.

Suppose. Mr Roe has avoided all this; he has managed to winter his bees without the loss of one colony. He will henceforth consider himself a master, because he has read somewhere, that only a master is able to winter bees without loss. Spring looks very propitious; his colones have used very little of their stores; they are full of bees and brood, and everything looks well. But, all of a sudden, the weather turns cold and remains so for some time; the stores of the colonies are exhausted in double-quick time, and starvation and death threatens his bees. He would like to give them full frames of capped honey, but has none; his honey was sold in the fall, hence he will buy to feed, and he may consider himself lucky, if he is able to obtain pure honey or first class white sugar; but woe unto his bees if he thinks anything will do, if it is only sweet, stuffing his bees with poor syrup, sugar or glucose, or spoiled infected honey, forgetting all about dysentery and foul brood.

All this being the consequence of avarice which made him sell his last drop of honey, probably extracting in the fall more than the bees could spare instead of saving some in case of emergency. But next year Mr. Roe will manage things differently. He now feeds his bees, whether they are in need of it or not; besides he had read about stimulative feeding, and wants to push his colonies now in that way; his colonies get diseased with dysentery, and commence to rob. He does not feed in time, is careless in doing it, and uses no judgment in general. Beside these he makes many other mistakes. He bothers with weak, queenless colonies, imports or buys costly queens from Italy, Egypt, Syria, Carniola, etc. His night's rest is even disturbed by dreaming of that big *Apis dorsata*.

But, we will cover all these shortcomings with the cloak of brotherly charity, and see how he manages his bees through the summer. We find him in the apiary, extracting. He looks rather pleased, for his pets have been very industrious. Everything is full and crowded. He must extract, put on sections and remove those finished. But, on closer observation, we notice that he works too hasty. Now, this section does not fit; that honey-board does not suit; he has mislaid his knife; cannot find another instrument he wants; the bees he shakes off in front of the hive, which may incur the loss of a queen; he cannot immediately replace full frames by empty ones, because the worms and moths have ruined them; he throws out some of the uncapped brood into the extracted honey; his extractor is a miserable clap-trap affair; in short, he lacks order and neatness. Such are peccadillos of a would-be bee-master in summer.

But what about fall management? Will he improve upon his former mistakes. It has been a poor honey year, but he has had lots of swarms. How does he act now? Very dilatory indeed. He did not feed his light colonies early in September; little of the stores consist of capped honey; colonies rob one another without the least anxiety on his part. To our expostulations he answers: "Oh, well, one cannot be so very particular; if I do lose one colony, that does not make much difference; I will unite some; others I intend to bury and a few I will put into the cellar; I hope to get along nicely, and there is time enough to do all this yet."

We are rather surprised at his answer, but have resolved to let him alone. But winter sets in early and his preparations are not yet finished; whether or not his cellar and ditches are fit to put bees in has not entered his mind. Next spring, when he puts his bees on their summer stand, he finds dead bees by the quart, some of them molded and decayed, suffocated, drowned and starved. Still, he is contented, because others fared no better and you cannot winter bees without having some dead ones in spring! Poor consolation!

A few more points which I shall mention before I close. Instead of leaving costly experiments to masters, some, who have not the time nor money nor knowledge, engage in extravagances. They have read about giant colonies, American honey-racks, artificial fertilization, etc., etc., and our friend Roe goes to work with a vengeance, tries everything new, spends and loses time and money to find in the end, that he paid too dear for his whistle.

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Rural New Yorker.

Pollen in the Hive in Winter.

PROF. A. J. COOK.

In articles written for other journals, and in my "Manual of the Apiary," I have stated that the old bee could live for long periods without pollen. As honey, however, is a hydrocarbon, and so contains no nitrogen, it is to be presumed that the old bees need and do eat some pollen during the active season, to supply the waste of tissue, consequent upon all physical activity.

I have further stated that pollen was an indispensable requisite to brood-rearing; that it is an essential element in the food of the larval bees. As a scholium under this last proposition, I have expressed the opinion that in some conditions the presence of pollen in the hive in winter is a positive injury, and that in all cases it is unnecessary. But I would remark, and with emphasis, that this pollen is more valuable as soon as the bees commence to fly the following spring, and then any frames that contain it should be given to the bees.

These facts have lately been called in question by several writers. I think most of the critics object, simply because they do not understand my position. One writer, however, who, whatever else may be said of him, puts forth very original ideas, and contradicts nearly every well grounded fact in apiculture, calls for proofs.

1. I have wintered bees on food which was made wholly of cane sugar, and which I had analyzed, and which gave no trace of nitrogen. This was fed on clean combs which, so far as we could see, contained not a trace of bee-bread. New combs are so transparent that they cannot contain more than the faintest trace of pollen, at least without showing it. I have fed bees, right in the busy season of the year, this same kind of food and have had them so shut up that they could get at no other, and they have lived in this way for weeks and have built large combs, and when given liberty were in good condition. It is impossible to prove that bees need and must have nitrogenous food when they are actively storing, but this position is sustained by all analogy.

2. in the last experiments the bees would have enough pollen in their stomachs and on their pollen baskets, so that they would put quite a little in the cells after first building the comb, and so would commence rearing brood, but the brood-rearing would soon be discontinued. After the brood-rearing had ceased, I could set it to going at once, by giving the bees a frame of bee-bread. In such cases we must not feed honey, as there is often quite a little pollen in the nectar which the bees have brought to the hive. Some honey, as basswood, often contains quite a trace of this. This would give enough pollen to rear a little brood. Again, for several winters I have practiced giving half our bees pollen, and the other half, frames with no pollen. In all cases we have noticed that those without pollen would always be without brood in the spring, while in the other hives we almost always found brood. Those without pollen would go to gathering very fast as they could get pollen the first of April and would then, or as soon as we would supply the lack of pollen in the hive, go rapidly to breeding.

These last experiments have satisfied me that bees are often better off with no pollen in winter. In the best condition they will eat little or no pollen, as they breed very little, and in these circumstancest he presence of pollen would do no harm. So in just the best cellar or in any condition where the bees are kept just right, no harm will result from the presence of pollen. In the South, too, where the bees fly out often, there is no danger from the presence of pollen in the hive. Here in the North, on the other hand, we often have a warm time in January, and the bees, unless so protected that they do not feel the warmth, will commence breeding if they have pollen. They may get a large area of brood. Now if there is no chance for them to fly, or if the weather becomes cold they are injured by this activity which came, we may say, as the result of the presence of pollen. The next Spring they are in feeble condition, and there is more of a tendency to dwindle away as the warm days incite them to fly forth.

If bees can be kept perfectly quiet in winter, they eat nothing but honey, and do not need to void their feces. With activity comes more food-taking, perhaps, too, they take some of the nitrogenous food, and as a result they become diseased and die. I have never found any support of the theory of the late Mr. Quinby, that bees excrete a dry powder in winter. The facts that I observed in our colonies wintered with and without pollen have led me to the above theory. The theory may not be correct, but the facts are still to be explained. I am so much convinced that I remove all of the pollen if I can as I prepare the bees for winter.

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For the American Bee Journal.

Drones and Drone-Workers.

S. S. BUTLER, M. D.

How can we get our queens fertilized by the best drones? Every bee-keeper has a few colonies that are much superior to the rest. Why? I claim that they have better queens that have mated with good drones—the result is—*best* colonies. I use the word "best" to distinguish them from others which are all the way from "poor" up to "very good."

What kind of drones do those *best* queens give? Fine large ones, fully one-third larger than drones from those small active queens, which are degenerates; for all the imported queens that were produced in natural swarming, are of medium size. Queens that have given me the most industrious workers were of medium size; abnormal queens are very prolific, giving great quantities of what I, for want of a better name, shall call drone workers; also quantities of small, active, swift-flying drones, for our large, clumsy and slow *best* drones to compete with. The consequence is, that supposing there are as many of the fine as of the poor drones, the poor ones being so much swifter, nearly all of our queens mate with the poor ones, thus keeping our apiary full of queens that, although they are prolific enough, their eggs are so poorly vitalized that the workers are short-lived, make short flights, can stand but little labor, and amongst them are great quantities of drone-workers, amounting sometimes to fully one-half. I am satisfied that they do no work outside, among them are no ragged-winged ones.

That there are large quantities of them in almost every apiary, I am certain. How can you tell them? In this way: When honey is scarce, the bees first kill off the drones, and towards the last of drone killing, you will see the workers in front of the hive licking and pulling certain ones about, keeping them outside, and persecuting them nearly the same as they do drones. I have seen it stated in such cases that bees were robbing and used to think it was so, but it is not; and you can prove it in this way: Anyone who has blacks, hybrids and marked Italians, will find, in front of the different hives, the same kind of bees that are in the hives (which would not be the case if they were robbers) that were killed off, for blacks and hybrids are great robbers. They would be in front of Italians and hybrids, and Italians in front of the blacks.

These drone-workers, I am satisfied, are the cause of the small amount of honey obtained by some colonies that keep full of bees, in comparatively good seasons, for it takes a large amount of honey to keep the hive full of those poor good-for-nothings, which all has to be brought in by those bees that have stamina enough to make out-door workers.

The remedy is to keep an abundance of drones from the best queens, and not to let any of the others rear any, or, if they do get some, trap them off.

Here is the history of two of my colonies the past season, Nos. 2 and 37; it has been a poor year. No. 2, a pure Italian queen, medium size, quite an ordinary layer, keeping only 5 or 6 Gallup frames full of brood during the best of the season; the workers were perceptibly larger than any others. No doubt they were longer lived, as the hive was full of bees and gave, before they swarmed, fully 100 lbs. of extracted honey, while the average was but 42 lbs. There never was any great stir about the hive, few standing around the entrance, while there were quantities about No. 37, and others, that gave but very little honey; they were bringing in stores while others were consuming what they had brought in, during the early part of the season, and her daughter's bees had filled up the hive.

The queen in No. 37 was of the same age as the other, a very prolific layer, had mated with a hybrid drone, giving some black and a good many two-banded bees; the drone was no doubt one of those poor ones; she laid nearly twice as many eggs as No. 2, was full of bees, but I extracted but once, only 18 lbs.; at the close of the season they killed off nearly one-half of the workers, while none were killed in No. 2. Why this difference? One of these two reasons made the difference: Either it is not a benefit, but rather a detriment for a queen to be what is called very prolific (we would not expect as good colts from a stallion that had sired 20 colts in a season as if he had sired but 10); why should we expect as good workers from a queen that lays 4,000 eggs, as from one that lays but 1,500 or 2,000. 2. Or else supposing the queens were equally good, the quality of the eggs of No. 37 were spoiled by the poor drone she mated with.

I have had, and no doubt every old bee-keeper has had many such cases; in a good year they do not kill off those drone workers (see Mr. Heddon's article, page 481, Oct., 1881, *Gleanings*).

W. F. Clarke, in Oct. *Gleanings*, page 494, says: "Mr. Jones says he got 62 queens in one lot, only 2 or 3 imperfect ones." I claim that the only test of a perfect queen, and that she has mated with a perfect drone, is the worker progeny, which must be very industrious, strong and long-lived. I would as soon expect to get 60 No. 1 colts from a fine stallion in one season, as 60 fine queens at one time from a colony. Horsemen wishing to get tip-top colts from extra stallions, let him get but very few.

H. Alley, in the BEE JOURNAL, May number, 1880, page 237 (one who has had more experience than any other person living raising queens), says: "Where too many are reared in one hive, even though they are 16 days from the egg, do not live so long as queens that are reared in hives where only a small number are reared at one time."

P. L. Viallon (a young queen breeder but a very observing man), says in Nov. *Gleanings*, page 525: "I have experimented on this subject several years, and have come to the conclusion that it is an easy matter to degenerate bees, and there is no improvement to be made on the daughters of imported mothers." Further on he says: "I have found my bees a little less energetic after 2 or 3 generations." A frank acknowledgment that by his management in rearing them, they do degenerate, and he says that he shall breed only from imported mothers.

I think the system of breeding is radically wrong somewhere, that has to send to Italy to get queens to keep up his stock. Why does not the Italian stock run out? Any one that will procure his stock from some locality in Italy, say 10 miles away from any one that is rearing forced queens, and after getting them, raise all his queens by natural swarming, keeping only those cells that are perfected before they swarm out, always breeding up, need not, and will not have his bees degenerate.

It is a principle running through all nature, that in propagating, the less in quantity, the more perfect in quality. Then who can say that the most prolific queens are the most profitable?

Greiner Bros., in the BEE JOURNAL of Sept. 21, seem to have the idea that "I think that a common hive is better than a frame hive." If they have followed me in all I have said, they will recollect that I said that it was not the hive that made the quality of the bee. I spoke of dividing, as practiced by almost every one; it is only the few that give the divided part a queen or cell. I would like to see all of our friends rear such perfect, hardy bees, that they would all winter without loss, no matter how they were kept, only seeing that they had plenty of good stores. I would not call any system "safe and harmless" that cost me nearly one-half my bees.

Los Gatos, Cal.

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Semi Tropic, California.

Damage Done by Skunks to Bees.

N. LEVERING.

Aside from bruin, there is no animal so detrimental to an apiary as that highly perfumed creature wearing the euphonious name of "skunk." Many apiarists are not aware of the extent of damage done their bees at this season of the year by these pestiferous creatures, who hang about the apiary like hungry office-seekers about the public crib and with as great yearning for its contents.

The evidence of their nocturnal visits are very discernible about the hive—marks of their claws about the entrance and the earth pawed out in front, and not unfrequently effecting a passage under the hive and tipping it over upon its side—their object being that of bees and honey. The ingenuity displayed by these sagacious animals is somewhat amusing. They scratch upon the front of the hive or knock at the door, as much as to say, are you at home? The bees hearing the alarm rush out to ascertain the cause, when his skunkship receives them on his bushy tail, which, when well filled, he slashes about in the dirt for the purpose of disabling the little defenders, and when he accomplishes this he turns and devours them, when another and like experiment is made, and thus by repeated tail manipulations the colony is soon reduced in number until it becomes an easy prey to the bee moth or dies for want of sufficient numbers to keep up the requisite heat in the hive.

A friend recently informed me that on visiting his apiary, he found several hives tipped over on the sides, and some of the frames containing honey drawn out and the honey devoured, which was evidently the work of his skunkship's undermining operations.

I am often asked, "What is the remedy?" I know of nothing better than to kill the skunk—to wage a war of extermination upon the invaders with a little "cold pizen," which may be administered in small pieces of fresh meat placed near the entrance of the hives, especially those bearing the evidence of their depredations.

At this season of the year bees are often weak in stores, especially so this season, and when weakened in numbers, will soon pass in their checks.

Oro Fino, Cal.

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☞ Subscriptions may commence with the first number of any month in the year.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Jan. 12, 13—Nebraska State, at Ashland, Neb.
Geo. M. Hawley, Sec., Lincoln, Neb.

17, 18—N. W. Ill. & S. W. Wis., at Freeport, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

17, 18—N. E. Wisconsin, at Berlin, Wis.
T. F. Turner, Sec. pro tem.

24, 25—Indiana State, at Indianapolis, Ind.

25—Northeastern, at Utica, N. Y.
Geo. W. House, Sec., Fayetteville, N. Y.

Feb. 1, 2—N. E. O. & N. W. Pa., at Jamestown, Pa.
W. D. Howells, Sec., Ashtabula, Ohio.

April 11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May ——Champlain Valley, at Bristol, Vt.
T. Brookins, Sec.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

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Los Angeles County Convention.

The Los Angeles County, Cal., Bee-keepers' Association held their regular monthly meeting at the office of C. N. Wilson, Los Angeles, on Dec. 17, 1881.

The President appointed F. E. L. Marsh, Secretary *pro tem.*

The minutes of the last meeting were read and approved.

The committee to take measures to organize a State society reported progress, and further time was given to report on constitution and by-laws for the State Association.

On motion, Mr. D. S. Given, of Illinois, inventor of the Given foundation press, and Mr. J. McIntyre, of Canada, were elected honorary members of the Los Angeles County Bee-keepers' Association. The above-named gentlemen being present, stated that they were both here looking for suitable places to go into the bee business.

C. N. Wilson was re-elected President, Robert Hall and Jesse Sutton Vice-Presidents, F. E. L. Marsh, Secretary, and J. E. Pleasants, Treasurer.

On motion, the committee on State association was increased to seven, and the President appointed Wm. Rathmussen, D. S. Given, J. H. Book addititional members of said committee.

The question of bees destroying fruit was discussed at some length, and the subject of disease amongst bees, its cause and cure, was considered by F. E. Marsh and J. W. Wilson.

Adjourned to meet at the same place on January 21, 1882.

F. E. L. Marsh, *Sec.*

From Colorado Farmer.

Colorado State Convention.

Colorado is fast taking rank with the older States of the Union in the matter of bee culture, and before another decade there is no doubt of the fact that this will be a most important industry in the State.

This is especially gratifying, the more so because of the fact that it has only been a few years since there was no bee culture of any consequence in the borders of the State. To have accomplished the results as at present existing, in so short a space of time, is a magnificent tribute to the energy and progressive spirit of the people of Colorado. Bee culture is fast becoming recognized as an important factor in the commerce of the country, and if properly fostered and encouraged in the West, will soon grow to large proportions. Heretofore there has been no organized effort to promote the interests of bee culture in Colorado, and this fact has tended to retard its growth and expansion. In spite of this drawback, however, great strides have been made in the way of advancement, but those more directly interested have been seriously considering, for some time past, the organization of a State Society, like those in existence in older States in the East, so that, by concerted action, there might be more rapid advancement and progress. This feeling at last assumed definite shape, which resulted in a call for all those interested in bee culture in Colorado, to meet at Denver on December 15, for the purpose of perfecting a State organization.

Valentine Devinney was chosen as temporary Chairman and Robert L. James as temporary Secretary. The constitution of the National Bee-keeper's Association was adopted to govern the State society. The name, "Colorado Bee-keepers' Association" was adopted.

D. S. Grimes was elected President by acclamation. Mr. Grimes made a brief speech, thanking the Association for the honor conferred upon him. He said that Colorado had long been noted for having the best bread and butter, now the State is to take a forward step and have the best honey.

The following Vice-Presidents were then elected: Arapahoe county—J. L. Peabody; Jefferson county—V. Devinney; Douglas county—G. Stoner. The election of other Vice-Presidents was postponed until the last day of the meeting.

Robert L. James was chosen as Secretary by acclamation.

Mrs. Olive Wright was elected Treasurer by acclamation.

V. Devinney, of Jefferson county, and G. Stoner, of Douglas county, were elected as an Executive committee, which, with the President, Treasurer and Secretary, constitute the full board.

The Secretary was instructed to secure articles of incorporation, under the laws of the State of Colorado.

Met in the evening at 8 o'clock.

A discussion arose about the value of charcoal and sawdust in the hive, and charcoal seemed to be the favorite. A slanted board was recommended to be placed in the bottom of the hive which would enable the bees to work out the dead bees and moths.

The question arose, "was it better to let them swarm, or divide them," and there seemed to be a division of opinion. If a man undertakes to divide, and does not know how, he is likely to lose them. Several instances were related of persons losing bees when they knew nothing of the process of dividing.

Mr. Estlake related how he had cut the wings of the queen to prevent the swarm from leaving, and even then they would go away and leave the queen there.

Louis Brock bought 40 colonies three years ago. He had 68 in the fall and in the spring he had only 2 left. He fed them all summer and mice then destroyed the queen. The 2 mice were found in the hive dead and covered with wax. He let them work along and swarm naturally. He has 6 hives in good condition and took 138 pounds of honey.

It was claimed that honey was the best food. James Haviland recommended corn meal and New Orleans molasses.

Mr. Chilcot has 20 colonies now; had 4 in the fall, and took away about 40 pounds of honey.

D. S. Grimes had 15 colonies last spring, and has taken away about a ton of honey, and now has 33 colonies. He has 1,000 pounds of comb honey in frames that he intends using in the spring. Have 75 acres of sweet clover pasture. He uses the Thomas hive. If a colony is weak coming on to the close of the season, destroy the queen and get a good one.

The opinion was approved that there are only certain localities in Colorado adapted to bee culture. Bees will not go more than 1½ miles 3 for pasturage without being tired and worn out. Adjourned.

SECOND DAY'S SESSION.

At 1 p. m., a tempting array of honey, in frames, jars, bottles and table, while specimens of hives and jelly glasses, were spread upon the various tools useful in the apiary were scattered about the apartment. The attendance was as good as that of the first day and a much livelier interest was manifested by those present.

J. L. Peabody spoke on the subject of "artificial swarming," and did not advocate its usage in extensive apiaries where the sole business was honey. He referred to city bee-keeping, and recommended a tight fence, eight feet high, about the hives, as the bees at that height on leaving, would soar away above the neighbors, and so avoid any ground of complaint being made against them. Two colonies of bees during the last season, by increase and product, have netted this gentleman $100 each, a success which he ascribes to the fact of his care in preventing waste.

Dr. King, of Boulder, gave his experience from one colony as a start, to a collection of about 125 stands. The doctor advocated wintering bees in the cellar, giving them no exercise and allowing no ventilation from the top of the hive. He had noticed his Italian bees going 14 miles for pasturage, in following up the blossoming raspberries, which mature more slowly toward the range. Since July 7 one colony had produced 400 pounds, which, with the rest, was wholesaled to Boulder merchants at 25 cents per pound. He hived by means of the queen-cage, letting the swarm go, but holding the queen captive, which always brought them back. Comparing drone and worker comb, the worker whiter and more regular, more salable, but the drone would be preferred on account of its being lighter, by those versed in honey matters, wishing it for their own use. Dr. King recommended the American hive.

John McBroom wintered by banking the hives with dirt, and, contrary to Dr. King, believed in ventilation from the top of the hive—leaving a small space below for the passage of bees. Last winter he saved by this method 64 out of 66 colonies.

Jesse Eastlake spoke of the honey plants, one of which he had with him. Willow, gooseberry, cotton wood, wild cherry, and plum, ashberry, and strawberry plants, are all utilized either for honey or pollen. Wheat blooms are used in season, and clover of different kinds with milkweeed, are visited by little workers with excellent results.

H. M. Richards, of Arvada, had obtained his start from one colony given him by a disgusted neighbor in 1877, and now had over 100. He exhibited some fine honey of different kinds made by bees from milkweed, being pure white throughout.

After one or two more short addresses the association, by its President, Mr. Grimes, was invited to meet jointly with the Horticultural Society, on the second Tuesday in January, and and it was so decided. The annual meetings of the association will be held the second Tuesday in December next.

* * *

☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

* * *

☞ The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association, will meet at Jamestown, Penn., Feb. 1, 2, 1882.

W. D. HOWELLS, *Sec.*

* * *

☞ The annual meeting of the N. W. Illinois and S. W. Wisconsin Bee-Keepers' Association, will be held in Temperance Hall, Freeport, Stephenson Co., Ill., on Jan. 17 and 18, 1882.

JONATHAN STEWART, *Sec.*

* * *

☞ The Indiana State Bee-Keepers Association is called to meet in annual session, Wednesday and Thursday, Jan. 24 and 25, 1882, in the rooms of the State Board of Agriculture. By order of EXECUTIVE COMMITTEE.

The Northeastern Bee-Keepers' Association will hold their twelfth annual convention in the Common Council Halls, at Utica, N. Y., on the 25th, 26th, and 27th days of January, 1882. The executive committee are determined to maintain the high standing and enviable reputation the association has justly gained in the past, and propose to outdo all former efforts on this occasion. From present indications the coming convention promises to be the largest and most interesting ever held in America. New features will be introduced, and business of vital importance will be brought before the convention that makes it the duty of every member and bee-keeper to attend. Essays and addresses are expected from Capt. J. E. Hetherington, W. L. Tennant, L. C. Root, James Heddon, Chas. Dadant, T. G. Newman, N. N. Betsinger, Dr. A. H. Marks, and others of America's renowned apiarists, on the most interesting topics of the day. If you wish to enjoy the benefits to be derived from the good work already in progress by this association, you will surely attend. All are invited; none can afford to remain at home. Articles and implements of the apiary for exhibition, etc., should be sent to the Secretary, at Utica, N. Y., who will take personal charge of the same and arrange all articles so as to compare favorably with others on exhibition.

DR. A. H. MARKS, *Pres.*
GEO. W. HOUSE, *Sec.*

* * *

☞ The Nebraska State Bee-Keepers' Association will hold its annual meeting in Ashland, Neb., on the 12th and 13th of January, 1882. A cordial invitation is extended to all who are interested in bee-culture. Members will be returned to their homes by the railroad companies at 1 cent per mile.

T. L. VONDORN, *Pres.*, Omaha.
G. M. HAWLEY, *Sec.*, Lincoln.

* * *

☞ The Texas State Bee-Keepers' Convention will be held at McKinney, Texas, on Tuesday, April 25, 1882.

* * *

CLUBBING LIST FOR 1882.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly BeeJournal (T.G.Newman)	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 60
Bee-Keepers' Instructor (W.Thomas)	2 50..	2 35
The 4 above-named papers.......	4 50..	4 00
Bee-Keepers' Exch'nge (Houck & Peet)	3 00..	2 80
Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper........	2 60..	2 40
The 7 above-named papers.......	6 30..	5 50
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) ..	2 40..	2 25
Binder for Weekly, 1881...............	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

* * *

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

SELECTIONS FROM OUR LETTER BOX

Questions.—Last season was so wet and cold the flowers did not yield any honey; at any rate they did not get but very little honey. I am wintering 80 colonies. I am going to move my bees (most of them) further out in the country, about 30 miles. Is it best to take them on snow? Will the disturbance be any injury to them? There is no way to take them but on wagon or sled; the road is so rough that I do not think it possible to take them on wagon in warm weather (unless in an express wagon). What time is best, the first of the winter or toward spring? I intend making bee-culture my business, and am giving my whole attention to it, therefore I need your highly esteemed JOURNAL.
A. L. ETHERINGTON.
Milton, Nova Scotia, Dec. 29, 1881.

[We cannot advise the removal of bees in any manner, during a season when they cannot have a good flight immediately afterward, and would sooner run the risk of breaking down combs, in early spring, over rough roads, than the risk of disturbance in winter. It *might* be safe to move them on the snow, but all the chances are against it.—ED.]

Packed in Sawdust.—I have 40 colonies of bees packed in sawdust. I have always packed them so, with success. In the winter of 1880-81, I lost 2 out of 53 colonies. I keep them because I like to work with them. I have the American hive, or rather the Hill hive. S. B. BRILLHART.
Kendallville, Ind., Jan. 6, 1882.

Poor Summer for Bees.—I started last spring with 16 weak colonies. We had 10 days honey harvest early in July. I obtained 500 lbs. of honey from alsike and sweet clover. I had to feed for winter. I increased to 31—doubled back to 17, and fed coffee A sugar; I think it the best for bees to winter on. I have wintered on it and foundation; no other comb and no pollen. The bees bred in the fall and early in spring when they could get no pollen at all, and did well. I sold all my honey at 25 cts. per lb. at wholesale and retail. I do not see why extracted honey should be classed with glucose and rag-syrup, and sold at from 7 to 10 cts. I have no trouble in getting 25 cts. for my honey, all extracted. I now winter out-of-doors in double-walled hive, with air-space all around and underneath.
H. RICHEY.
Sing Sing, N. Y., Jan. 3, 1882.

Has Taken a Notion to Bees.—I am old, have the rheumatism, and have taken a notion to bees, but have not succeeded very well. I lost 28 colonies out of 30 last winter. I take 2 other papers, and when I get my mail, I read the BEE JOURNAL first. I would rather miss my supper than to miss a copy of the BEE JOURNAL.
M. WHEELER.
Colesburg, Iowa, Jan. 6, 1882.

Bees and Grapes.—A neighbor called on me in the spring, and saw my hives (the Langstroth), and concluded he had begun wrong. He asked me to call and see his bees, to transfer them. On seeing his arrangements, I left, after giving such advice as I thought neccessary and I think it was appreciated. Later in the season, when bees were working on grapes and golden rod, I took an empty hive to transfer the bees into, and found the party had brimstoned his bees, as "they had spoiled his grapes." I examined the grapes and tried to convince him that the yellow-jackets and quail had been there first, assisted by the linnets and wild canaries, as they are called, but he had his mind made up. I thought, before I left him, that he felt a little sore, but wouldn't acknowledge, as some body's bees visited the grapes occasionally. I have often watched to see my bees, spoiling my fruit, but have never succeeded; but in grape picking time in filling the boxes a great many get more or less broken, and one can see the difference at once. We put 50 and 60 lbs. in a box, and a ton or more in at a load, before loading they stand at the end of the rows 4 or 5 high, and thus many get broken. You can then see thousands at work sipping the juices that would run to waste. I have distributed the copies you sent, where I think you may receive a benefit in time. I have more or less callers all the time, and always try to keep the BEE JOURNAL and Cook's Manual to the front.
J. D. ENAS.
Napa, Cal., Dec. 25, 1881.

Remedy for Ants.—In the BEE JOURNAL for Oct. 5, J. L. Wolcott says he has used fine salt as a remedy for ants, for 20 years. Will he please tell us how he uses it?
JOSEPH BEATH.
Corning, Iowa, Jan. 1, 1882.

My Report.—I would not be without the JOURNAL for much more than its cost. I could not send my report in time for your table, as our harvest did not end till October. I commenced with 17 colonies and increased to 34. I obtained 800 lbs. of surplus honey (one-half being comb), and sold it at from 15 to 20 cts. per lb. The past season's crop was short in this locality.
R. C. AIKIN.
Shamburgh, Iowa, Jan. 5, 1882.

Will Try Again.—In the winter of 1879-80, I lost 126 colonies of bees out of 144, by dysentery. In the winter of 1880-81, I had 81 colonies on summer stands, with a box outside filled in with chaff all around. Last spring I had 12 colonies left; I increased to 24 by natural swarming. Last summer was a poor season for honey; we had no rain for 4 months, and in the fall every flower was burnt up. My hives are the Langstroth, except one, which is a box hive and has stood the test for 9 years. If I could winter safely I should be satisfied. I shall try again. JOSEPH LEE.
Farmers, Mich., Jan. 3, 1882.

Cold Spell.—We have a cold spell. For two mornings it has been 2 degrees below zero—and this is one of them. Bees in this locality seem essentially right, so far.
T. F. BINGHAM.
Abronia, Mich., Jan. 5, 1882.

Favorable Winter.—So far, the winter has been very favorable for bees in our section. T. L. VON DORN.
Omaha, Neb., Jan. 4, 1882.

Worth $5.00.—I would not miss a number of the BEE JOURNAL for a year's subscription. It has been more than $5.00 benefit to me during the past year. As long as I keep bees I want the BEE JOURNAL.
E. HUTCHINSON.
East Avon, N. Y., Dec. 29, 1881.

A Good Showing.—Bees are rather scarce here yet, on account of the severe winter and great loss last year. Many lost their entire stock. I, however, managed to get through with 15 colonies (in a reduced and feeble condition) out of 67 that I had in the fall. My account stands thus at present. My financial showing is, as I think, somewhat encouraging. I sold 856 lbs. of honey (397½ extracted and 458½ in section boxes), for which I received $200.79; sold 1 colony during the early part of the season for $15.00; received premiums on honey at our State Fair. $12.00, and at County Fair, $6.00.

Total cash received...........	$233.79
Increase of 42 new colonies by artificial swarming at $10.00 each..........................	420 00
Entire gain................	$653.79

Divide this by 15, the number of colonies in the spring and we have $43.50 per colony; or, if we say nothing of increase, premiums, etc., and take the cash received for honey only, we have $13.38 per colony. In the above account I have not counted my own time, as I consider this a pleasant pastime. My extracted honey was put up in neat tin-topped tumblers, and my comb honey in neat 1½ lb. dovetailed sections, without glass. My honey averaged a little over 23 cts. per lb. The past season has been the best that I have seen for many years; the yield was principally from white clover. H. BESSE.
Delaware, O., Dec. 29, 1881.

Thymy.—Please explain the word "thymy" which is used on page 25 of Bee-Culture, written by the editor of the BEE JOURNAL. J. S. DUNCAN.
Browning, Mo., Jan. 1, 1882.

[Webster defines it thus: "abounding with thyme; fragrant." We used it in the latter sense.—ED.]

Questions.—Last spring I kept my queens laying very profusely by feeding cheap syrup. This fall, as soon as the honey flow began to shrink, I fed double the amount of pure heartsease honey. About Oct. 5, they stopped laying. Why did they not keep on laying? Will cutting out drone-comb discourage bees? How far will a queen go from her hive to find a mate? Why do queens not lay in the second story of a hive as readily as in the first story? How can two strains of bees be kept pure in the same apiary.

M. L. Trester.

[They stopped breeding because of the cold nights; and the impossibility of properly caring for the young. Bees will not become discouraged from cutting out drone comb, if honey is coming in good with which to patch up, or if good worker combs or foundation be furnished to replace the drone comb. Queens are supposed to go a distance of 1½ to 2 miles, if necessary. Queens, as a rule, accept the lower story as a home, because they are nearer the bulk of the brood-nest, and pollen and honey are first stored there. Two strains cannot well be kept pure in the same yard, with queen-breeding going on in both strains.

Remedy for Whooping Cough, Colds, etc.—The following is one which I consider unsurpassed: Mix of good whisky, 1 pt., pure extracted honey, 1 pt., and 2 tablespoonfuls of pine tar. Dose for children, from 15 to 20 drops and increase. For adults, teaspoonful—given when the cough is troublesome, 3 to 10 times a day.

This is a lovely day. The thermometer indicated 62° F. in a cool, shady place at 3 o'clock p. m. Bees are actually gathering honey from a small patch of mammoth mignonette. Queens are laying as if spring was near at hand. I never saw a better prospect for a large increase, 3 months hence. Our queens stopped laying last year about Nov. 5, and began Jan. 15; but this is a year when you may record bees laying uninteruptedly, for a whole year—a thing I have never seen before in Texas. Our prospects for a wheat crop is good; oats, rye and barley all look well. One more week and then comes the busy season with us—oats to sow, and corn-land to prepare.

B. F. Carroll.

Dresden, Tex., Dec. 25, 1881.

A Beginner.—I kept bees for 6 years on the old plan, till 1881. In the fall of 1880, I had 11 colonies of black bees on the summer stands, and in the spring of 1881 they all died except 1 queen and 72 bees. I had no honey but what we used in the house. Last spring I bought 3 colonies (2 Italians and 1 black), caught one wild hybrid swarm, and I paid $5 for learning to handle bees, and never was sorry for it. This fall I put 19 colonies in winter quarters in good condition. Success to the Bee Journal. 1. What seed will be best to sow with sweet clover? Will white clover do? 2. Where can I get Simpson honey plant seed? Answer through the Bee Journal.

J. C. Mishler.

Ligonier, Ind., Jan 1, 1882.

[Yes, white clover will do to plant with sweet clover; but, if sown in the fall, wheat is the best, or as good as anything to mix with it; if in the spring, oats or anything of a summer crop will answer. 2. We do not know just at present, but presume dealers having it for sale will advertise the fact in the Bee Journal, long before planting time arrives.—Ed.]

Repairing Losses.—The spring of 1881 found me, like many others, with few bees, and as I wished to build up again, I bought 5 colonies of Geo. Grimm, for $30.00. The express charges, caps and sugar for feeding cost $10 more, making $40 in all. These gave me 8 swarms and 517 lbs. of comb honey, which I sold at 15 cents per lb.—$76.55; the 8 swarms are worth $36. After deducting the cost of the 5 colonies, I have $72.55 for my labor.

E. Pickup.

Limerick. Ill.

Linseed Oil as a Medicine.—Mr. Twitchel's caution in regard to the use of linseed oil as a medicine, on page 12 of the last number of the Journal, I think hardly necessary, since the druggist would be hard to find who would sell "boiled" linseed oil for that purpose, and few would go to the paint-shop for it. The article used as a medicine and kept in stock by druggists, is *cold-pressed*, and often prescribed by physicians, on account of the mucilage it contains, instead of castor oil.

G. L. Tinker.

New Philadelphia, O., Jan. 7, 1882.

Bees Doing Well.—My bees are all in good condition now. They have had a flight about once a week all winter. I owe my success to the Bee Journal. Long may it live and continue as good as it has been in the last year.

S. C. Smith.

Wheeler's Grove, Iowa, Jan. 3, 1882.

Preparing Bees for Winter.—I am 64 years old, but not too old to enjoy the company of my blessed bees. I bought two colonies last May, and increased to eight, (4 natural swarms and two nuclei,) but got no surplus honey. White clover was almost a total failure. June was wet and cold and bees hardly gathered enough to live on, until the golden rod, of which there is two varieties here, and asters, several kinds also blossomed, and then my bees gathered their winter stores. Had there not been a large flow of honey from these, they would not have had enough to winter on. I built a small house 19x6 feet, one roof, double boarded and packed with saw-dust on the North side and ends, with double door and double floor, and two thickness of paper between floor, all shingled. except about 20 inches in width on the South side, which is of matched boards in two sections the length of the building, made so as to open at any time the weather may be warm enough to give them a flight, or to warm them up if desired. My plan of preparing them is to tack a piece of coffee-sacking over the frames after I have placed two or more ¾ by ⅝ inch strips of boards across the frames. I then put quite a thick quilt; on the top of that I put two dry blocks, resting on the cross-pieces and put on the cap. I cover them up with old quilts, carpets, etc. I have two small ventilators in the roof; a two-inch pipe near the ends of the building.

O. B. Scofield.

York, Maine, Dec. 19, 1881.

A Good Honey Crop.—I wintered all my bees without loss, and they came out very strong in the spring, and the yield of honey was as large as we ever had—from 100 to 150 lbs. to the colony, besides a fine increase of stock. Success to the Bee Journal.

Sunbury, Pa. Martin Kinney.

Production and Sale of Honey.—I began the last season with 15 colonies which had survived the fearful winter, but they were by no means strong. Most of them were the dark Italians. Not having enough to occupy my time, I prepared my hives and went to work on my farm. When a swarm issued, my wife hived them if I was not at home. On April 17, they began to bring in pollen; the weather at once became warm and balmy. The last half of April and all of May, the weather was warm and clear; there was hardly a day that the bees could not fly. The spring bloom was in abundance; the later part of May they began to swarm. My best colonies swarmed 3 times in 10 days, for which I refused to take $25.00 as soon as hived. By the last of June I had 32 colonies; I sold one, and 2 left for parts unknown. I returned 10 of them to the parent colonies, after taking away the queens. I took 850 lbs. of comb honey. This was a small yield. I can sell all my honey at my door at 20 cts. per lb. We have an abundance of soft maples and willows, which gives our bees early pollen. The soil is very rich, and we have an abundance of linden, some trees growing 3 feet in diameter. A good colony will store 100 lbs. in 10 days. I have sown since last March, alsike clover, sweet clover, motherwort, catnip and Rocky Mountain bee plant. It is to the interest of every one to plant and sow as much as possible for the bees.

H. Clark.

Palmyra, Iowa, Dec. 26, 1881.

Queen Excluders.—Prof. Cook, in his address before the Michigan Convention, refers to a plan mentioned by Mr. Jones at the National Convention, "of preventing flight of queens and drones by means of perforated zinc over the entrance of the hive." Please give the plan more fully.

H. Z. S.

[It is described in the Journal for March 30, 1881, page 98.—Ed.]

Oldest Bee Paper in America
THE AMERICAN
BEE JOURNAL
Established in 1861

RATES FOR ADVERTISING.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance :

For **4** weeks		**10**	per cent.	discount.
" **8** "		**20**	"	"
" **13** "	(3 months)	**30**	"	"
" **26** "	(6 months)	**50**	"	"
" **39** "	(9 months)	**60**	"	"
" **52** "	(1 year)	**75**	"	"

Discount, for **1** year, in the Monthly alone, **25** per cent., payable in advance.

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Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

Transient Advertisements payable in advance. —Yearly Contracts payable quarterly, in advance.

THOMAS G. NEWMAN.
974 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

◆

☞Thousands have used Kendall's Spavin Cure for rhuematism after all other remedies had failed, and have experienced instant relief. 1w4t

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

To Promote a Vigorous Growth of the hair, use Parker's Hair Balsam. It restores the youthful color to gray hair, removes dandruff, and cures itching of the scalp. 1w4t

◆

"**How do You Manage,**" said a lady to her friend, "to appear so happy all the time?" "I always have Parker's Ginger Tonic handy," was the reply, and thus keep myself and family in good health. When I am well I always feel good-natured." See other column. 1w4t

The Apiary Register will be ready to send out next week.

It devotes 2 pages to each colony, embracing between twenty and thirty headings, neatly ruled and printed, with space at bottom for remarks, and so arranged that a single glance will give a complete history of the colony. Each book will also contain printed rules for the apiary, and twelve pages ruled and printed for an apiary cash account. As each book is intended for a several years' record, it is gotten up on first class paper, and strongly bound in full leather covers. There will be three sizes, sent postpaid, at the following prices :

For 50 colonies	(120 pages)......	$1 00
" 100 colonies	(220 pages)......	1 50
" 200 colonies	(420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start. We have added these to our new Premium List for getting up Clubs for the JOURNAL.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise of less weight than 8 ounces. Canadians will please remember this when ordering Binders.

◆

☞ Look at the wrapper label and see that proper credit is given for money sent us, within 2 weeks. If it does not then appear, please send us a Postal Card, and we shall with pleasure make the correction, for an error may occur during the rush at this season, though we endeavor to be careful to always give proper credit.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club :

For a Club of **2,**—a copy of "Bees and Honey."
" " **3,**—an Emerson Binder for 1882.
" " **4,**—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5,**— " " cloth.
" " **6,**—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

Photographs of prominent Apiarists —Langstroth, Dzierzon, and the Baron of Berlepsch.—Price 25 cents each.

◆

Honey and Beeswax Market.

BUYERS' QUOTATIONS.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Jan. 9, 1882.

The following are the latest quotations for honey and beeswax received up to this hour :

CHICAGO.

HONEY—The market is lively and prices steady. We quote light comb honey, in single comb boxes, 18@22c ; in larger boxes 2c. less. Extracted 8@9c.

BEESWAX—Prime quality, 18@22c.

AL. H. NEWMAN, 972 W. Madison St.

NEW YORK.

HONEY—The supply is full, and trade is lively. We quote as follows: White comb, in small boxes, 18@22c ; dark, in small boxes, 15@17c. Extracted, white, 10@11c.; dark, 8@9c.

BEESWAX.—Prime quality, 21½@23c.

THORN & CO., 11 and 13 Devoe avenue.

BOSTON.

HONEY.—1-pound combs are a desirable package in our market, and a large quantity could be sold at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

BALTIMORE.

HONEY.—But little on the market, and prices are not quoted.

BEESWAX.—Southern, pure, 21@23c.; Western, pure, 21@ 22c.; grease wax, 11c.—*Baltimore Market Journal.*

INDIANAPOLIS.

HONEY.—New, in 1 or 2 lb. sections, 22@25c.—*Indianapolis Stock Review.*

PHILADELPHIA.

HONEY.—The supply and demand are alike nominal.

BEESWAX — Best light 23@25c.—*Philadelphia Merchants' Guide.*

CLEVELAND.

HONEY—Comb honey has been a little dull for a week, but prices are unchanged. We sell best white 1 lb. sections at 22c.; 2d best, 20c., and dark 18c ; 2 lb. sections, 17@20c. Extracted, 12c. in small packages; 11c. in half bbls.

BEESWAX—22@25c.

A. C. KENDEL, 115 Ontario Street.

ST. LOUIS.

HONEY—Plentiful and slow for all save choice bright comb—this sold readily; comb at 18@22c.; strained and extracted 9@11c. to 12½c.—top rates for choice bright in prime packages.

BEESWAX Selling lightly at 19@20c.

R. C. GREER & CO., 117 N. Main Street.

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HONEY—The southern boat this week brought 168 cases, principally comb. It is next to impossible to find buyers at current figures, except where a case or two is retailed to some small dealer. There would be no trouble in placing all offerings to wholesale buyers, if concessions were made, but this holders are endeavoring to avoid, at the same time being anxious to realize.

We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8¾@10c.; dark and candied, 7@8c. BEESWAX—23@25c.

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I pay 8@11c. for extracted honey on arrival, and 16@18c., for choice comb honey.

BEESWAX.—18@22c., on arrival. I have paid 25c. per lb. for choice lots. C. F. MUTH.

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I will sell **500 Colonies of Black Bees,** in Hives from one to three years old, to be delivered at depot at Albany, N. Y., as soon as May 1, 1882. I have had 15 years' experience in the bee business, and claim to know what constitutes a good colony. Persons wishing to buy will please write to **A. SNYDER,**
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Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1..	2.50
" " per half doz., after July 1	13.50

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Assorted samples of the four sizes, put inside one another as a nest, price 50 cents. These pails are very useful for many other purposes, after being emptied of the honey by consumers. The following are the prices :

	Per Doz.	Per 100
Gallon, holding 10 lbs. of honey....	$1.80....	$12.00
Half Gallon, " 5 " "	1.50....	9.00
Quart, " 2½ " " ...	1.20....	7.00
Pint, " 1¼ " "	.75....	4.00

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I now have on hand two sizes of Colored Labels for these tin pails (one size for pints and quarts and another for half-gallons and gallons), and can supply any quantity of either size, by mail, postpaid, at 1 cent each. When 100 or more of either size is ordered, I will print your name and address on them without extra charge. Prices for larger quantities than 200 given upon application.

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a four-inch Dunham Machine, just right to make foundation for small frames. Everything necessary to go right to work.
51w4t S. S. BUTLER, M. D., Los Gatos, Cal.

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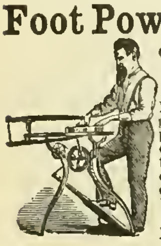

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FOR 1882,

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1w1y **D. S. GIVEN & C.**, Hoopeston, Ill.

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THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Items 33, 34, 35
Glucose Manufacturers in Conclave 33
A Kind Suggestion 33
Prohibiting Importation of Queens 34
Honey Shows at Fairs 34
Approbation 35
Sundry Questions and Answers 35
  Comb Foundation 35
  Florida as a Bee State 35
  Basswood and Sweet Clover 35
  Winter Feeding 35
The Apiary Register Book 36

Among Our Exchanges—

Honey as Food 37
Importance of the Pursuit 37
Food Adulteration 37
Are Eggs Laid in Queen Cells 37
Bee Government in the Hive 37

Correspondence—

Reply to Mr. Dadant on Wintering 38
Upward Ventilation in Winter 39
The Coming Bee Hive 39
Troubles of a Beginner 40
  Mrs. Cotton's Frauds 40
  Changing Sex of the Drone 40
Bee Houses: Are they Profitable 41
Best Summer and Winter Hive 41
Foul Brood, and Other Matters 41
Is Parthenogenesis Proven? 42
Bee Keeping as an Occupation 42

Convention Notes—

Northwestern Wisconsin 43
Southwestern Iowa 43
Northeastern of New York 43

Selections from Our Letter Box—

Wiring Foundation 44
Wintering Bees in Texas 44
Italianizing and Transferring 44
Bees Prosperous 44
Extracting 44
A Good Showing 44
A Good Investment 44
The Pollen Theory 44
Deserted by the Queen 44
The Wrong Man 44
Unprolific Queens 45
Mild Winter 45
In the Cellar 45
Production of Comb Honey 45
All that Could be Desired 45
Dwindling 45
Is there Danger of Smothering 45
The Last Prize Queen 45
Canadian Opinion 45

Glucose Manufacturers in Conclave.

Pursuant to a call for that purpose, the glucose manufacturers of the United States met at the Grand Pacific Hotel, in Chicago, on the 10th inst, for the purpose of *devising means for self-protection* by the organization of a National Association. Referring to the second day's procedings, the Chicago *Tribune* of Jan. 12th says:

> The glucose manufacturers continued their sessions at the Grand Pacific yesterday with closed doors. The meeting decided to refuse the publication of the names of those present. There were fifteen factories represented, which embraces all but two of those in the country. An organization was formed, to be styled the "National Glucose and Grape-Sugar Association." Officers were elected as follows: President, J. A. Cunningham, of Danville, Ill.; Vice President, J. Firmenich, of Buffalo, N. Y.; Secretary and Treasurer, J. M. Jones, of Leavenworth, Kan.; Executive Committee, P. B. Veiller, of Chicago; W. P. Coast, of Iowa City, Iowa, and A. Woolner, of Peoria, Ill. The meeting adjourned subject to call. The Executive Committee will meet to-day to deliberate on the future action of the association.

We expect next to hear of the butterine, suine, oleomargarine and slushine manufacturers forming a National Association for the purpose of protecting themselves *against honest dealers* who refuse to handle their *stuff* under any other than its proper name. Recently, at a meeting of the Chicago Retail Grocers' Association. we have been told, a resolution was proposed and adopted by a large majority, not to handle any of the above stuff in any manner whatever, and we think the time is approaching when glucose will be equally as abhorrent.

A Kind Suggestion.

We are always pleased to receive suggestions or criticisms concerning the BEE JOURNAL, and hence give place to the following:

> I like the new size of the BEE JOURNAL much better than the old, but do not like the advertisements on the first page. We have become accustomed to look on the first page for the valuable editorials, and think the BEE JOURNAL would look much neater with all the advertisements at the back. We only suggest the change as an improvement—not as a complaint. Bees are wintering well, and have used but little honey.
>
> Fairland, Ind. L. R. JACKSON.

The reason for devoting the two first and last pages to advertisements, was to form a cover to keep the reading matter from being soiled, and preserved for binding; this was suggested by several of our correspondents, but, as we much prefer to commence the editorial matter on the first page, we will do so hereafter, and place all advertisements at the end. Those who want to preserve them for binding, should either have a Binder and place them in it as fast as received, or else carefully put them away out of the dirt and dust, after reading, until the volume is complete, for binding.

◆

☞ A correspondent in Canada wants us to say in the BEE JOURNAL whether the Apiary Register Book can be sent to Canada by mail, and without "duty." It can; it is a "book," and such go to Canada from the United States free of duty, and, as we prepay the postage, there is nothing extra for Canadians to pay more than for those living in the States.

◆

☞ By an oversight of a clerk in the paper warehouse, one of the bundles of paper that was sent to the printer was much thinner than the rest, and it was used before we knew it. We have scolded them and hope it will not occur again.

Prohibiting Importations of Queens.

Our attention has been drawn to the following paragraph, published in a late number of the Detroit (Mich.) *Evening News*:

> The suggestion of a Michigan bee-keeper, that Gov. Jerome take action to prevent the Canadians from flooding our "infant industry" with queen bees produced by the pauper labor of Palestine, Java, Ceylon and elsewhere, is timely and appropriate. These foreign insects may be superior to ours, and may result in the production of more and better honey at less cost, but that argument would hold quite as well in the case of foreign iron and steel and cotton and woolen goods. It is not more or better honey that our American industries are after; what they want is more work, and from all accounts the native American queen bees will give the drones ten times more labor than the foreign ones.

We think it hardly possible that, among all the bee-keepers in the State of Michigan, one can be found thoughtless enough to give utterance to a sentiment so illiberal as that attributed to them above; and had one done so, even in a jocular manner, we wonder that the *News* should seize upon it as a text for a ludicrous burlesque. There are so many incongruities in the article, short as it is, that no intelligent bee-keeper can be persuaded to view it in any light but that of badinage, though stamped with the impress of serious argument. Let us candidly consider the inconsistencies in the article quoted:

1st. There is not a bee-keeper, in the State of Michigan, so stupid as not to know that Gov. Jerome can take no action to prevent the importation of queen bees, or any other stock, from Canada, or anywhere else, which is intended as an improvement upon our present stock. This is regulated by the general government.

2d. Bee-keeping is not an "infant industry," but is coeval with history itself. It is only its scientific management which is comparatively young; but it is developing with astonishing rapidity.

3d. Canadians have had no queen bees produced in Java or Ceylon with which to flood our country, and the imported Palestine queens they *have* sent us, were produced by an American citizen in Cyprus, and who, we believe, still holds his residence and right of sufferage in the State of Michigan.

4th. It is not yet a settled point that these "foreign insects" are superior to ours, except as bred upon or from our stock. There is no analogy between them and "foreign iron and steel, and cotton and woolen goods." Instead of being imported to enter into competition with American products, the reverse is the case; they are desired for the purpose of stimulating a fixed occupation, and giving remunerative employment to thousands of our citizens who are now scarcely self-supporting, besides developing a source of national wealth and foreign traffic now comparatively neglected, and only awaiting intelligent and improved application, with the best facilities to accomplish it.

5th. It *is* "more and better honey that our American industries are after." In order to obtain the best bees to secure these results, enterprising Americans have chilled in the bleak winds of Russia, thirsted on the burning sands of Arabia, smoked the friendly pipe in Germany, bearded the lion in the jungle of India, endured malaria on the Nile, climbed the walls of China, scaled the rugged mountains of Caucassus, scorched under the Cyprian sun, dreamed 'neath the sunny skies of Italy, ascended the steppes of South America, and waded the swamps of Africa. No clime has been too distant, and no obstacle too difficult, to discourage the American in his efforts to secure bees that would gather "more and better honey." At the present time, thousands of our countrymen are cultivating the soil to insure a certainty of "more and better honey," and the science of botany has been made to contribute of its lore to assist the apiarist in his purpose.

6th. As drones are not supposed to be laborers, we cannot imagine how the "native American queen bees will give the drones ten times more labor than the foreign ones." This is doubtless a joke, or sarcasm, on the poor drones.

All in all, the article quoted above is too illiberal and selfish to be regarded in any light but that of a joke, and with such a spirit prevailing, our boasted progression in bee-keeping, or any other science, would soon retrograde, and but a few decades would be required to return us to the fogy styles and superstitious notions of a century ago, and perhaps return us to a level with the barbaric ages, for we could adopt no improvements, for fear of patronizing the "pauper labor" of some country whose civilization ante-dates our own by thousands of years.

Honey Shows at Fairs.

The time is now at hand when the Vice Presidents of the National Society, for the various States, should use all their influence to get a good List of Premiums offered by the Managers of Fairs, for Bees, Honey, Wax, etc., and we hope they will each one see to it, that no stone is left unturned which may prove advantageous to the general good of the bee-keepers and honey producers of America.

Dr. W. W. Hipolite, Vice President for Arkansas, is already at work with the managers of the Arkansas State Fair, and has drawn up the following list of Premiums:

1. Best package of comb honey in the most marketable shape, 5 pounds or more.
2. Best crate of comb honey in the best shipping and most marketable shape, 20 pounds or more.
3. Best package of extracted honey in the most marketable shape, one pound or more.
4. Largest and best display of honey, both comb and extracted, in the most marketable shape.
5. Best display of honey, both comb and extracted, in the most marketable shape, by a lady.
6. Best colony of black bees, in movable-comb hive.
7. Best colony of Italian bees, in movable-comb hive.
8. Best Italian queen bee.
9. Best display of beeswax, 3 pounds or more.
10. Best machine for extracting honey.
11. Best wax extractor.
12. Best bee-hive for all purposes.

Exhibitors must satisfy the superintendent that the honey entered for these premiums is the product of his or her apiary, or of one under their control.

Dr. Hipolite, in his letter to the Managers of the State Fair Association, with his suggestions concerning the "honey department" makes the following remarks, as we see by the Arkansas State *Gazette*:

> I would further suggest that larger premiums should be offered for the products of the apiary, to secure a larger display of these products from different portions of the State. The State fair is a great educator of the people, and bee-keeping is an industry which should be developed as one of the industries of our State; for the honey crop may be made an important item of material wealth to the State. In other States the production of honey has assumed large proportions, and there is no good reason why it should not with us. On the first day of March, 1881, the assessor of Los Angeles county, California, reported 16,613 colonies of bees for that county, and the same county shipped, in a single season, 1,500,000 pounds of honey, while in Arkansas, with honey

resources nearly if not quite as great, less honey is produced than is consumed. Merchants in Little Rock will tell you that while their customers prefer the honey produced here, even at a higher price, the supply is not equal to the demand, and they sell California honey over their counters.

There is a ready foreign demand for every pound of pure honey this country has to spare. A commercial exchange says that "The American honey trade with Great Britain is growing rapidly. A recent English order calls for 58,000 one-pound cans of pure extracted honey." The same is true of other nations; even Japan is now buying largely of American honey. This country takes the lead of all others in the production of this commodity. In other States, with natural advantages inferior to our own, there are men who produce honey by the tons, and if we would but turn our attention to it, we could produce tons where we now produce pounds. The State Fair Association could do much to encourage the development of this industry in our State by the offer of liberal premiums on the products of the apiary.

The labors of Dr. Hipolite have been rewarded. It was but a few years ago that no notice whatever was taken of bees and honey in the Premium List of the State Fair; but now they are assigned a place as a separate class, with a Superintendent, and liberal premiums are offered, and through his exertions, we have no doubt, it will increase and grow in importance yearly.

We have no authority to call upon the Vice Presidents everywhere to act—but in the interest of the pursuit of bee-keeping we would urge them to attend to the matter without another week's delay—"for the time is at hand."

◆

Approbation.—Mr. James Heddon, Dowagiac, Mich., writes as follows:

"The Weekly in its present form is just what we need, and *no one* will ever drop it for any other paper. The Weekly was a long-felt want, and the form it now is in is A No. 1. I think I am as free to tell you what I do *not* like; so that gives the above its deserved weight."

Like all who have expressed their opinion of the present form, we much prefer it—but, as the Weekly for last year was an experiment, we were obliged to take the most economical form. The change for this year adds a thousand dollars a year to the expense account. An item we now feel warranted in assuming on account of our large increase of subscribers for 1882. The Weekly is no longer an experiment, it is a fixed fact.

Sundry Questions and Answers.

Comb Foundation.—I intend going to Florida soon to engage in bee-keeping, and find I can buy my bees (if I am on hand when they swarm) for $1 per swarm. It would be my intention to build them up rapidly by the use of comb foundation in movable frames, but there are still some points which books throw no light upon, such as: 1. Should foundation be full size of the frames? 2. Will such a method yield any returns the first season? 3. Would it be more profitable to buy the old colony, hive and combs for $5?

Boston, Mass. Geo. E. Dupee.

1. Much depends on the make and weight of the foundation. With Dunham foundation, about 5 feet to the pound, the most satisfaction and the greatest profit will be derived from using full frames—that is, so the foundation will hang about ½ or ¾ of an inch from the bottom-bar, and within ⅜ of an inch from the end-bars.

2. Yes; quite as satisfactory as the parent colony, if the swarm be a strong one, and foundation is used in all the frames.

3. If the colonies and combs you buy for $5 each are in box hives, it would be much cheaper to buy the first swarms and foundation. Let us figure it up (taking two as the basis, for you would probably buy your box hive before a swarm had issued): 2 first swarms, $2; 4 lbs. (20 sheets) foundation and freight, $1.88; 2 hives, $2—total, $5.88; against, 1 box hive and contents, $5; 2 new hives, $2; labor in transferring, $1—total, $8; making a difference of $2.12 in favor of first swarms and foundation, and straight new combs.

Florida as a Bee State.—I would like to know something about Florida for the bee business. 1. Is it a good country for honey, and is the honey of good quality? 2. What are the principal honey plants of that State? 3. What part of the State is the best for honey? Please answer these questions in the Semi-Monthly Bee Journal. The winter here has been very mild; I think the bees will winter well. The honey crop has been light for the last two years, I hope the coming season will make up for lost time. I have 28 colonies, all packed in chaff, and they are doing well. I wish the Bee Journal a happy and prosperous New Year. B. M. Lingle.

Paoli, Ill., Jan. 7, 1882.

We cannot answer your questions with the precision and accuracy they deserve, but presume if you will address a letter to Mr. W. S. Hart, New Smyrna, Fla., who is Vice President for that State of the North American Bee-Keepers' Society, or to Messrs. Alderman & Roberts, Wewahitchka, Fla., enclosing stamps for reply, they will take pleasure in giving you full and reliable information upon everything pertaining to the industry. They are all practical men.

Basswood and Sweet Clover.—Where can I get about 100 basswood trees two years old? What method shall I pursue to get basswood seed to grow? I want to put out a nursery. How old must the trees be before blooming? Where can I get sweet clover seed, and what is the price? I have 60 colonies of bees. My yield was light last year; but they paid expenses. My bees are in good condition up to this time.

Thomas Pratt.

Carlisle, Iowa, Jan. 6, 1882.

You can obtain young basswood trees from nearly all nurserymen, and they will bloom when six to eight years old. The seeds should be sown in drills, as are plums, cherries, etc., and carefully cultivated till about one year old, then transplant; it will be well to partially shade them the first summer after transplanting. Select soil, if possible, in proximity to water-courses, bottom-lands, or on gravelly soils in which water lies near the surface through the hot months of summer. As it makes a rich, luxuriant shade tree, it is a great favorite in all our northern cities in the parks and along the avenues. Sweet clover seed can be bought from most dealers in apiarian supplies, at about 30 cents per pound. See our advertising columns.

Winter Feeding.—I must have the Bee Journal. I cannot afford to lose a number; it is too precious. I commenced the season with 3 colonies, increased to 9 by natural swarming, and took 268 lbs. comb honey in 2 lb. sections. I fear some have not stores enough below for winter use. 1. At how low a temperature will it do to open a hive. 2. At how low a temperature will they take food at the entrance? 3. At this time of the year, is it best to feed at entrance, or under chaff cushion? Bees are flying a little to-day, temperature 52°.

F. S. Williams.

Jackson, Pa., Dec. 27, 1881.

1. When the bees can fly freely.

2. They will take feed from the entrance, if they are short, whenever they can fly from the entrance with safety.

3. We would prefer to feed under the chaff cushion, as the syrup or candy is kept at a better temperature, and the bees are more comfortably fixed to take it.

◆

Photographs of prominent Apiarists—Langstroth, Dzierzon, and the Baron of Berlepsch.—Price 25 cents each.

SAMPLE PAGES OF THE APIARY REGISTER BOOK.

By particular request of several subscribers we give below the two "Sample" pages of the "Apiary Register," the blanks filled up with imaginary entries, and the Remarks, below, such as would be useful, etc. Of course, it is quite impossible to imagine all the contingencies which might arise requiring special mention, and to provide for this we have devoted a liberal portion of each page to remarks, leaving space enough, however, to give a history of the colony for three years. Two pages like the above, facing each other, are devoted to each colony.

[SAMPLE PAGES SHOWING HOW TO FILL UP THE BLANKS IN THIS BOOK.]

COLONY No. 19.

Year.	Month.	Day.	Principal Events in the History of this Colony.	HONEY. Pounds of Comb Honey.	HONEY. Pounds of Extracted.	HONEY. Bloom Gathered from.
1879	5	6	Bought of John Doe, or Swarmed from No. 8, or Divided from No. 17.			
1879	6	20	Divided—made colony 30.			
1879	10	18	Total honey for 1879.	30	64	Sw. clo., linden, Sp. N.
1880	5	14	Swarmed—new colony 42.			
1880	6	20	Swarmed—returned the swarm.			
1880	9	16	Total honey for 1880.	48	29	Linden, mig. & alsike.
1880	10	4	Swarmed—new colony 84.			
1881	5	4	Gave ripe queen cell from col. 3.			
1881	5	12	Divided—made colony 96.			
1881	6	20	Queen removed for breeding.			
1881	8	2	Introduced Cyp. Q. from R. Roe.			
1881	9	25	Total honey for 1881.	25	96	W. clo., linden, sw. clo.

QUEEN From

When the Queen was Hatched. Year	Mth.	Day.	Race.	Strain.	Size.	Fertilized by.	Removed to.	CHARACTERISTICS. (Standard, 100 Points.) Industry.	Docility.	Hardiness.	Prolificness.	Color.
1878	7	5	Ital.	B.	large	black	....	70	60	65	70	yel.
							48					
1879	5	20	Cyp.	....	med.	Ital.	....	90	50	75	95	br't.

REMARKS.—1879—Nov. 1, put in cellar; strong in bees; about 28 lbs. honey, mostly fall, two-thirds sealed.

1880, April 5—Took out of cellar; weak; some dysentery.

April 25—Dwindled; breeding finely; fed diluted honey.

June 1—Fed sugar syrup and honey during May; fruit bloom abundant, but northeast winds and rain.

July 1—White clover was a failure, owing to wet weather; sweet clover abundant, colony strong, honey coming in fast.

Aug. 1—July was dry and hot; linden yielded well; sweet clover still doing nicely; extracted July 15.

Sept. 4—Golden rod is plentiful and yielding well; sweet clover mowed July 20, is white with bloom and covered with bees; extracted 30 lbs. to give queen room; still storing.

Nov. 8—Took off sections Sept. 20, all full; plenty of honey left for winter; strong in bees; put in cellar to-day.

REMARKS.—1881—March 15, put on summer stand; strong and healthy, with considerable brood.

April 15—Weather very cold, and the bees have diminished.

May 15—Weaker still; weather wet and cold.

June 20—Bees becoming very strong; weather hot; white and sweet clovers abundant; honey coming in rapidly.

July 10—Drouth has set in; bees have abandoned white clover, but very busy on sweet clover, motherwort and mammoth mignonette.

Aug. 10—Drouth continues; sweet clover in first seeding; that mowed and cropped in July again in bloom.

Sept. 20—Bees consuming stores; drouth continues; honey coming in from sweet clover and heartsease.

Nov. 5—Packed by placing in a box 6 inches larger than the hive, and filling in all around with chaff, on summer stand.

AMONG OUR EXCHANGES

MISCELLANEOUS.

Honey as Food.—The London (England) *Horticultural Journal*, gives the following extract from an address on the above subject, by Mr. T. W. Cowan, F. G. S., of Horsham, at the Brighton Health Congress:

Mr. Cowan said that bees in olden time were extensively cultivated for their honey and wax, and it was remarkable how frequently allusion was made to these products by ancient writers. We read that the land where Abraham dwelt was one "flowing with milk and honey," and that in the Mosaic law there were many statutes regulating the ownership of bees. Solomon recommended the use of honey in the words, "My son, eat honey for it is good." About 600 years B. C., bees seem to have been regularly cultivated, for Solon made a law requiring bee hives to be placed 300 feet apart in cultivated fields. The Persians, Grecians and Romans made use of honey extensively, and it was used for sweetening their beverages. It was mixed with wine, and to this day it is used by the Spaniards in sweetening "Malaga wine." It was used up to the seventeenth century when sugar was introduced, and as the use of this increased, the use of honey decreased. On the continent of Europe, bee-keeping had been carried on more extensively in former times than in England, and for a long time we had been depending on foreign supplies.

In the olden times, when bees were destroyed by brimstone, different ways were adopted for separating the different qualities of honey. The light-colored combs were pressed and strained to get the best quality, and the interior honey was used to make "pain d'epices," a sort of ginger bread sold in every town in France. Large quantities were imported into this country from Cuba, Chili, and, lately, extracted honey from California. It was not until the formation of the British Bee-Keepers' Association, in 1874, that really much progress was made in developing the honey resources of this country. Bees are no longer destroyed to obtain their honey, but are induced to build straight combs in frames, and these are taken out, and, having the cells uncapped, are placed in an extractor, by which means the honey is obtained in a pure state, and very different to the heterogeneous mass of honey, pollen and crushed brood which was formerly known by the name of honey. He stated that there was great economy in being able to return the combs to be re-filed, inasmuch as it took 20 lbs. of honey to make 1 lb. of comb. He wished it to be understood that bees did not make honey, but that they collected it from the nectaries of flowers, and that each flower yielded honey of its own peculiar flavor.

The climate of England was particularly suited for the purpose of bee-keeping, and there was no country where it could be produced better in flavor than in this. He said pure honey should be used by every family. It was no longer a luxury only to be enjoyed by few, but was sufficiently cheap to be within the reach of all. It had properties which made it a valuable food. It differed from alcoholic stimulants, which dull the intellect, as it produces a bright intellect. Children were very fond of honey, and one pound of it went further than a pound of butter. It had the peculiarity of keeping good, whilst butter would become rancid, and thus is injurious to health.

* * *

Importance of the Pursuit.—The Springfield, Mass., *Republican* gives its views on this subject as follows:

Bee-keeping is an interest of considerable importance. It has an extensive literature of its own and men enter into it with the true enthusiasm of science. At a recent convention of bee-keepers in Chicago, one of these enthusiasts in apiculture gave an interesting sketch of his pursuit in foreign countries of new races of bees. He set up an apiary on the Island of Cyprus to test the merits of the Cyprian bees; he visited Palestine and obtained colonies of Syrian bees, and after a deal of trouble succeeded in transplanting both varieties to this country. It is only within a few years that Italian bees have been introduced here and proved superior to the common black bees. These new races are claimed to be superior to the Italians. The Syrian bees, especially, are remarkable for their superior prolificness, swift flight and the long distances they are able to cover in quest of honey. The study of bees has a fascination for some people and it is often rendered a source of considerable profit. There is quite a library of books attainable on the subject, besides magazines, while at Chicago there is published by Thomas G. Newman a weekly devoted to apiculture called the AMERICAN BEE JOURNAL. This is an exceedingly neat little paper of 16 pages and is a complete cyclopedia of everything relating to bees.

* * *

Food Adulteration.—In noticing this book, the *Bee-Keepers' Magazine* remarks as follows:

It shows that much of what we eat and drink is so badly mixed up with foreign matter, that one who is compelled to do much of his eating away from home naturally wishes he had never read this book, for he need not be surprised to find himself imagining dried horse liver in his coffee, iron and indigo in his tea, minute tape worms in his butter (oleomargarine), trichina in his pork, terra-alba, alum, etc., incorporated in the bread, flavored glucose for honey, syrup, etc., etc. The above and hundreds of other dirty and poisonous substances actually are incorporated into much that we eat and drink, and the adulterators are growing rich at the expense of the public health, and we hope that just such books as this one may be widely circulated, until a public sentiment will be created against those enemies of the human race that will finally crush them out.

* * *

Are Eggs Laid in Queen Cells?—Dr. A. B. Mason, in the *Bee-Keepers' Instructor*, remarks as follows:

A writer in the December number of the BEE JOURNAL, under the heading of "Do Queens Lay Eggs in Queen Cells?" in relating some of his experience, says: "I do not dare, at present, directly to advocate what would, from the above, seem to be true, against the theories of experienced apiculturists. But here is my experience for what it is worth, and I confess to some few pinches of doubt about a number of things pertaining to bees, which are pretty generally taken for granted after reading them in a book or paper." The same correspondent refers to an offer of $50 having been made "to anyone who could prove that the bees ever removed an egg from a worker to a queen cell." It seems to me, from my own and this correspondent's experience, that it would be better to offer the $50 to any person who would prove that the queen ever laid an egg in the queen cell. The experience that this correspondent gives is worth more than all the "theories of learned and experienced apiculturists." There are good reasons for believing that a queen does not deposit eggs in queen cells; and if I have the inclination in the future, I will ask some of our experienced bee-keepers in "convention assembled," some questions, the answers to which will either overturn some generally accepted theories, or be directly contrary to all experience.

* * *

Bee Government in the Hive.—The St. Albans *Messenger*, says, that at the meeting of the Vermont State Board of Agriculture, Mr. O. C. Wait, of Georgia, gave an interesting lecture in which he said:

Though the bee is not made in God's image, yet many of their habits—neatness, industry, economy and government—may profitably be imitated by some men. It has been supposed that their government is an absolute monarchy, but on the contrary, it is a more perfect monarchy than the world has ever seen among men, and the females have their equal share. Mr. Wait here drew an amusing comparison between their government and our own, not only in a political but in a social sense. Every fruit-grower and farmer should keep a few colonies of bees for the more perfect growth of his crops. They carry the pollen from flower to flower, and thus, while gathering honey they spread the seeds of growth and multiply the fruit.

CORRESPONDENCE.

For the American Bee Journal.

Reply to Mr. Dadant on Wintering.

JAMES HEDDON.

My experience and observation proves that Mr. Dadant is correct in his judgment that the space above is the incentive which draws the bees to the top of the combs, and to the quilt. I think that I, perhaps, fell into the common error of imagining that Mr. Dadant's fixtures above were similar to my own, the same as he had in conceiving the shape of the space, and size of the same.

I use only 8 Langstroth frames, hence my hive is only $11\frac{1}{2}$ inches wide, instead of 14, as Mr. D. figures it. Perhaps, from the little I said in regard to the 2 inch space, on page 275 of Bee Journal, he had a right to suppose that I used a space 2 inches deep all over the entire top of my hive. Such is not the case, as former descriptions of my method will show. I have used 2 bent pieces, thus ⌒, about 6 inches apart in about the center of the hive. You will see that the ends of the bent pieces come down to no space at all, for what keeps them bowing is the fact that they are cut enough longer than the inside measure of the hive to give any bow desired, by slipping the ends inside the side-boards of the hive. You will now see that the ends of the quilt lay upon the frames flat from the ends of the hive toward the center, for about 4 inches, when it begins to rise gradually to the 2 inch height near the center of the hive. The whole space made amounts to about 108 cubic inches of space opened up above the bees, instead of 566 inches, as Mr. D. supposes it to be (and so puts it on page 354 of Weekly Bee Journal).

This season I have used but 1 bent piece, which cuts the space down to about $\frac{1}{3}$ of what I figure and describe above. I did not make the change because I saw anything detrimental about the former space, but because from what I had seen I thought that the space made by one piece would accomplish the object, viz: of making a perfect winter passage crosswise of the combs, and one stick requires less lumber and manipulation, than two.

I shall never comply with the "instincts" of my bees, where I think my reason is a better guide, nor with the instincts of my cows, horses, sheep, swine, etc. My bees have an instinctive hatred of having their hives opened, but I shall continue to open them whenever my reason dictates so to do. We should follow their instincts only, when our reason fails to grasp the case. I reason that if it is a rule that all bees in box-hives, split open from top to bottom, winter better than those that are tight, and that Mr. Jerome Wiltse, in an extended observation found that bees that contained a large space above them were almost the only ones that survived, and Mr. Vandervort reports the same thing, that mine will bear a winter passage above the frames, notwithstanding the fact that it is their instinct to glue up every little crevice about the top of the hive, as we are told.

I have never yet been able to demonstrate that any thin, or other quality that the honey might take on, had anything to do with the safe wintering of our bees.

I believe this. The great losses that apiarists suffer, by the death of their colonies, has one common cause, viz: dysentery. I do not believe that thin honey will cause that disease. I know that bees will have it in its most aggravated form when their honey is thick and in perfect condition every way, as far as the eye can detect.

In regard to small colonies, there is little to support a belief that they will not survive any of our severest winters as safely as large ones. It seems to me that it has been amply proven, that cold does not directly damage bees. I can bring more witnesses than you could print the names of in a whole column, to give testimony of the successful wintering of very weak colonies, during cold winters, when many strong ones died (not with cold, but dysentery). There is something about large colonies that seems to engender dysentery, I think because of a higher degree of heat they keep up in the center of the larger cluster, and greater consumption of stores, both tending to the use of pollen.

Some years ago Mr. Hosmer, of Minnesota, adopted and advocated the plan of reducing every colony to only one quart of bees, for winter. That movement, and its discontinuance, simply proves that the catholicon does not rest in the size of the colony.

One spring, after a good snug winter, I was buying some colonies of a farmer, when he pointed to a hive (box) that I had supposed empty, and said "I'll present you with that one," when I turned it up, and found three pieces of comb, all not aggregating three-fourths of a square foot, and thereon about a tea-cup full of bees. This hive had stood out under a "bee-shed," warmed by its shadow, and above the snow level. I took them home, and let them alone, as an experiment. They survived and made a colony, unaided, except by a little feeding.

I have no evidence that cider, stored in combs, causes dysentery—I don't know. I know that during the fall of 1879 my colonies worked so lively on a large cider mill here that they came near taking possession of it, during the hot weather of October. Though the following winter was very mild, they were confined more than 6 weeks at one time (if I remember right), and yet they had no dysentery. I believe that when the exact cause of the disease is known, it will be seen that it is not cold, acids, nor thin liquids that cause it, but solids, in the shape of pollen.

Because I "lost two-thirds of my colonies," it will not do to say that the strongest survived, for such was not the case, only the fittest survived; and why the fittest I defy anyone to tell.

I now have just 222 colonies in one apiary, put up in 5 or 6 different ways (some in a cellar), and does anyone suppose that Mr. Dadant or any other man can, by a complete over-hauling, "spot" the ones that the coming winter is going to condemn? I am a "doubting Thomas."

An old ignorant farmer, some 15 miles away, wintered all of his 30 colonies which were almost entirely neglected. Does anyone believe that all his sudden increase, to these 30 colonies, were all strong?

I admit that very frequent and extensive flights completely prevent or cure dysentery in its first symptons, but I also admit and assert that there are other conditions over which we may hope to get control that also prevent it, though the bees do not see the light for 6 months of the coldest weather. I know of many such cases, and I also know of the disease raging so badly in Kentucky and Missouri, where the flights were frequent, that thousands of colonies succumbed.

As long as we depend upon "flights," whether caused by the rising temperature alone, or that combined with our efforts to arouse our slumberers, in this locality, we shall be at the mercy of the blind forces, as of old. When I said semi-dormant state, I meant that quiet state which they rest in through the winter, even when crossing combs or exercising to keep up the temperature. I might have called it the "quiet state," for no shifts in the hive or degree of cold outside causes the physical and mental excitement, that jarring or opening the hive does.

The main reason why putting bees in the cellar with some accumulation, is bad, is because of the disturbance by the removal.

Mr. Dadant wishes to know upon what I base my idea that brood-rearing causes dysentery. It is this: Experience and observation have shown me that of all the colonies that die with it, a vast majority leave brood. Of all those that are healthy at the same time, a large majority have no brood. Reasoning has forced me to conclude that brood-rearing demands the use and manipulation of pollen and in the course of such manipulation the bees partake of it, during this early period in the season, when they cannot fly to void their feces, and that pollen is a substance that posesses a residue that cannot be passed from the system by sensible and insensible perspiration, as could the excess of water contained in thin or cider honey. Dysentery is the result. I do not claim to be just right in this matter. I only claim to give my honest opinion, formed from my experience and observation.

I presume that in many of the points at issue, Mr. Dadant and myself are both correct. Soil and climate make great differences, and educate us in very different directions. It seems to me that such honest and friendly controversies cannot fail to lead to some thoughts and discoveries that will help us on to the control of this important branch of our industry. The more so, with such a man as Chas. Dadant at one end of it.

Dowagiac, Mich.

For the American Bee Journal.

Upward Ventilation in Winter.

JOHN A. BUCHANAN.

Just so long as success is attained in wintering bees by both methods—ventilation and non-ventilation, there will be earnest advocates of both systems. It cannot be that both systems are equally successful. There is no use to deny the fact that bees have been wintered by both methods, but which plan has been proven the best?

I advocate upward ventilation as the safest plan for general adoption.

Are we any more successful in wintering bees at present with all the modern appliances and knowledge of the science of bee-keeping, than we were 20 years ago? The general answer is "not a bit." Then, we ask, in what condition for the most part were bees then left for winter? Without entering into a description of that condition it will be understood when we say, winter found them as summer left them. No contraction of entrances, surplus boxes left on with entrance holes to them all open, and, as often as otherwise, glass in boxes broken out and doors open, thereby ventilating the hive most thoroughly, but still the bees were all right, and the winters then were just as cold as they are now. Why do we so often see in some of the bee periodicals modern bee-keepers say:

"I guess I shall be a candidate for 'blasted hopes,' as my bees have died during the past severe winter, notwithstanding my great care in packing so thoroughly, and those that have survived are so weak it will require the most of the season for them to get in good condition again, but I am not altogether discouraged as I have purchased a lot of black bees in box-hives from an old fogy bee-keeper and will transfer and Italianize them, and try again."

Now this is a little too funny; but it proves what? That bees are safer whether in box or frame hives, left in their summer condition, without packing, than they would be with packing as generally adopted by the would-be cautious apiarist of to-day. Judging from reports given in the papers from time to time, and from my own extensive observations, last spring, of a great number of apiaries, I have arrived at the conclusion that more colonies survived the winter of 1880-81 that were left to themselves with thorough ventilation, and unprepared by packing, than the number saved that were packed for protection. During a severe winter there is a great amount of moisture arising from a colony of bees, which will condense on walls of the hive, or in the packing materials, which will have so filled them with moisture that the temperature of the hive is brought down so low that it is impossible for the bees to generate sufficient warmth to be able to change their position when the stores in reach of them are exhausted. This cold, damp condition of the hive and packing soon exhausts the vitality and reduces the temperature so low that the colony becomes unhealthy and diseased. All of this trouble can be avoided by means of a proper condition of hive, and providing means for escape of this sweat or moisture.

In nearly every case, last spring, where I found hives that had been placed on blocks raising them up from bottom-board from $\frac{1}{2}$ to 1 inch all around, the bees survived and so where hives were much open from season cracks, which provided thorough ventilation and circulation of air, thereby keeping cluster, combs and hive dry. Again, hives, regardless of size or depth of frames, were packed with chaff, straw, etc., ample means provided for free circulation of air through the packing, keeping all perfectly dry, with sheltered eastern or southern exposure, colonies so arranged lived and came through with less consumption of honey than where unprotected. Again, in hives of very large size, without upward ventilation, but large entrance openings and sheltered exposure, were saved. But limited success was attained with bees in cellars where the temperature remained much below 45°.

One fall, I placed quilts, well tucked down over frames and over these thick chaff cushion, and contracted the entrances to $\frac{3}{8}$x2 inches, and flattered myself I had them in better condition than some of my neighbors' bees that were left with entrances full width of hive open, and also several large holes open into honey boxes. But, imagine my surprise at the beginning of the next season, upon examination, to find those terribly neglected, badly managed bees working in boxes and swarming a week or ten days sooner than my own.

Is it not a fact that the first swarm of bees you hear of in the season, has come from some old fogy's bees, cared for as above described; and don't it bore you, too?

On the 28th of last May, a gentleman passing my apiary asked me if I had had any swarms yet. No; the best of them are only occupying, with all my nice quilts and chaff cushions, about two-thirds of the usual number of frames. "Well," said he, "I had a nice swarm this morning." And without further talking I got on my horse and rode out (5 miles) to his place to see the hive that had so early cast a swarm. He had but 1 colony and that was standing in the corner of his garden with a few boards over it to shelter it from rain, and had not been touched or opened since the honey was taken from boxes the fall previous.

The hive was a Langstroth; 10 frames 8 inches deep; honey-board, with $\frac{1}{2}$ inch space between it and frames; one large honey-box on, holes open and two $1\frac{1}{2}$ inch holes opened into the cap, where moisture passed off into the cap, which was fitted loosely and open at the joints. The entrance was nearly the full width of the hive, $\frac{1}{2}$ inch, and was open all winter and spring. A slight dash of Italian blood was in the bees. I have occupied this space to prove the position taken at the start, and cases similar to these have no doubt been observed by all.

Pack your bees as well as you wish, but see to it that said packing is kept perfectly dry by upward ventilation.

Holliday's Cove, W. Va.

For the American Bee Journal.

The "Coming Bee Hive."

W. T. STEWART.

In the Bee Journal of Dec. 21, 1881, we have an article from Dr. L. C. Whiting, on "The coming bee hive," in which he very forcibly illustrates some of the advantages of a reversible frame over any other frame. Any practical bee-keeper that will read his article thoroughly, will at once see that every advantage that he claims for a reversible frame, is true beyond a doubt. He further says that the frame alluded to was originated by Mr. Van Deusen, and that some of the best bee-keepers are using them, all of which is true. Now let me predict something and have it recorded in the American Bee Journal, for future reference, that in less than 10 years' time all the best bee-keepers in this country will use a reversible frame, and that the coming frame will not be the frame that Mr. Van Deusen has invented, be they ever so good. I have some of his style of frames, and they are good.

I have a reversible frame and hive of my own invention that totally eclipses his, for convenience. In mine, no wedges or following board is needed; there is nothing about it that the bees can glue fast; no place about it for one single moth worm of one-eighth of an inch long to hide from the bee. Every frame is exactly $\frac{3}{8}$ of an inch from side, top and bottom of hive; every frame the proper distance apart—no two frames touch each other. I can remove a frame from any part of the hive, without even shaking any other frame. I can turn the hive on the side, on the end, or even bottom-side-up, and every frame will remain in its proper place; I can put them in a wagon and move them anywhere, without any preparation whatever, and not a bee will be hurt. I need not kill a bee in taking out or putting frames back in the hive. There are no projections anywhere about frame, to interfere when extracting.

It is suited equally well for extracting or section comb honey; is changed in a minute from a large to a small hive, and *vice versa*—either of the four sides of the frame can be instantly reversed from top to bottom, from side to top, and any bar is top, or bottom, or side, as desired; everything about it is simple, practical and cheap; no other hive or frame like it has ever been described in any of the bee papers. It is, I think, "the coming frame" or hive. It can be used for any size or shape frame, and soon I hope to give all a chance to adopt it. I have experimented a great deal, and studied hard to get the best hive that could be made for all purposes, and I think now that I have it.

The best implements for the apiary are just as necessary as the best bees, and in a very short time Americans will have the best bee house, the best hive, the best pasturage and best sale for our products of any people in the world. Each of our leading bee-keepers have some particular tact for some one thing, and when all pull together we are mighty in bee-culture.

As this is the season of the year when we should be getting our hives ready for the coming season's work, I think we should discuss the hive subject. Persons that have never used but one style of hive, cannot imagine the difference there is in working them. Don't let us say this or that hive is good enough. While some are improving the bee in order to get the very best, let others try to improve the hive, so as to have the best bee in the best hive, and then we can do wonders in apiculture.

Eminence, Ky.

* * *

For the American Bee Journal.

Troubles of a Beginner, etc.

A. P. FLETCHER.

Some 2 years ago, I became interested in bee-culture (having previously known but very little about bees), by a circular from Mrs. Lizzie E. Cotton, West Gorham, Me., and about the same time *Gleanings in Bee-Culture*, by A. I. Root, Medina, O., fell into my hands, which I subscribed for, also Root's A B C, together with Langstroth, Quinby, Cook, and Mrs. Lizzie Cotton's book on bee-culture, all of which I have pretty thoroughly read during the past two years. Have had a little experience in transferring, and introducing queens, hiving, etc.

MRS. COTTON'S FRAUDS.

I very much admire all the above works, *except* Mrs. Cotton's. She is a contemptible swindler. Her book contains only 125 pages, for which she asks $1.00. Mrs. C. says, in her circular, "send me four dollars and I will send you one sample Controllable bee hive, one sample glass honey box, one sample feeder, receipt for feed, with complete printed directions how to manage bees on my plan." I sent $4 and received nothing but a roughly made model of what she termed her controllable bee hive—a thing of no practical use. Express charges 95c.

A lady, in this neighborhood, bought a colony of Italian bees of her, Mrs. C., for which she paid $20, and they are all dead. The hive contained only 5 frames, which I suppose is properly termed a nucleus. I was informed there were only a handful of bees in the hive when received.

In addition to the $20, the express charges were $3.52. A practical bee-keeper in this neighborhood, called on the lady soon after her purchase, and ascertained that the queen was worthless, and advised her to send immediately for another queen, which Mrs. Cotton promised should be shipped about the 25th of July, but it has not made its appearance. Now that the bees have all died, the poor woman has nothing left for her $23.52, but one "controllable bee-hive" and Mrs. C's famous *book on bee-culture*, with her photograph inserted on the first fly leaf. What a boon! The lady referred too is Miss Lovina Ewing, West Berkshire, Vt.

CHANGING SEX OF THE DRONE.

Mr. Gordon Bishop, a bee-keeper of Woodville, Wis., informed me that "when bees are in want of a queen, and have no other means of obtaining one, they make a queen out of a drone." I know, by reading, of only two kinds of layers, viz: a queen and a fertile worker. Mr. B., when asked how they did it, said he "did not know; but they did it!" Can you tell me how they do it?

In a certain village in Michigan, a notice for school meeting was posted on the district school house door, one of the articles of which read, "To see if the district will vote to *change the sex of the teacher*." The real meaning of the article was, to see if the district would vote to hire the man who had taught the winter term, to teach the following summer term also, instead of hiring a lady. Is there any way to "change the sex" of the drone to that of the queen? Mr. B. is a pupil of one Mitchell, who, according to Root, does not always furnish all that is ordered from him, after receiving the money.

Do bees make comb exclusively from honey? And if so, do they elaborate the wax scales while in the field?

Franklin, Vt.

[We do not think there is any way to change the sex of a drone or male larva to that of a queen or female, and this conclusion was arrived at after several experiments, when the transformation would have been likely to take place if it had been possible. Bees undoubtedly make wax from honey or its equivalent, such as sugar, syrup, and, perhaps crude juices or saps, which first, however, are rendered into honey, and its elaboration in scales from the wax-segments takes place in the hive, hence the hanging clusters always found in empty frames when comb building is in progress.

Since the foregoing article was received we have the following, sent for publication, which gives the other side of the question, and in order to do exact justice we will give it entire.—Ed.]

West Winsted, Conn., Dec. 9, 1881.

I am a constant reader of the Weekly Bee Journal, and like it very much. I think it is a little the best bee paper out, and I have seen some others. I notice that you are still severe on Mrs. Lizzie E. Cotton, and give you credit for being honestly impressed with the belief that you are doing the public a good turn by your articles about her. I, nevertheless, believe you are mistaken. I am indebted to her for my first lessons in bee-keeping, and have found her to be honest and reliable so far. I know that she is not a brilliant business woman, but I believe she does the best she knows how, and does not swindle anyone.

I have written you before about her. I offered through *Gleanings* (A. I. Root's) $5 for proof that any person had ever sent her money for goods and had neither received the goods nor the return of the money. Mr. Root sent me the names of two or three persons who had claimed such a state of facts. Mrs. Cotton sent me letters from the same parties acknowledging the receipt of the same goods. I have investigated her very carefully, both among her neighbors, and among those who have dealt with her, have seen a number who have ordered goods and bees of her and have got what they ordered of her. I have corresponded with those who have been there, and have been shown what there was to be seen by Mrs. Cotton herself. I am not paid for writing this article, but I think you have no right to say what you do about her unless you are ready to prove several instances of what you claim. I make the same offer to you. I will give $5 for proof of money sent to her, and received, without returns being made. If she is a swindler I want to know it, and will then denounce her. I do not claim that her husband has always been solvent or honest. But I do claim that since the business has been done in Mrs. Cotton's name that it has been done straight. I believe Mrs. Cotton to be trying to get an honest living in a legitimate business, doing it in an honest way, and that she is trying with the help of her husband to bring up a large family of children in the best way she knows how. I don't think you have any right to advertise her as a swindler unless you are ready to prove it, and I assert you cannot.

Some time I may want to offer to the bee-keeping fraternity free, through the Bee Journal, a new kind of hive, not to sell it, but to give the fraternity the benefit of my experience. I built last fall four hives of brick. They bid fair now to winter bees on about 10 lbs. of honey, out-doors, and to keep dry and bring the bees out finely in the spring. I never heard of a brick hive, I have thought several large volumes about bees and bee-keeping, and the brick hive is a part of the results. They cost a little more, yes, quite a little more, but if they will save 10 to 15 lbs. a year, of honey, and be warm and dry in winter, and cool and dry in summer, and save putting in the cellar, they will be a good thing. I think bees will be much less likely to swarm from them than from the ordinary hive. I am only an amateur, and only have 20 colonies of bees. If after trying my brick hives through a season

I think them a success, I will write you again about them. I do not expect to trouble you often this way.

R. E. HOLMES.

[We have published many “complaints” about Mrs. Cotton's business transactions, and there seems to be a good chance now for some one to get $5 back, by sending the proofs required by Mr. Holmes. Mr. H. admits that it is a man who has not “always been solvent or honest” that is carrying on business in a woman's name, and while persons have sent money to him (or her) for articles advertised, and have not received anything of value for the money, they are sometimes swindled even more than they would have been to have received nothing, having heavy express charges to pay on useless “traps.”—ED.]

* * *

For the American Bee Journal.

Bee Houses; Are They Profitable?

A. R. KOHNKE.

Now and then some one will inquire whether or not bee houses are profitable. Advocates of houses claim absolute protection from changes of weather, which appears to be their main object; besides that, it is claimed that they are quite secure from thieves. But the construction of a frost and burglar-proof bee house costs a little more than some may believe; its cost will, of course, be governed by its size, and, being double-walled, would cost about as much as a one-story house of the same dimension. That would be an extra outlay, for the bees would have to be in hives all the same. In Germany, bee houses are much in vogue, and an observant reader cannot help but notice the disadvantages. I will enumerate some of them, gathered from different German bee periodicals of late:

First. Mr. Hilbert lost his bees lately, by fire; his bee house burned down, and to move the colonies, was out of the question. This is a common occurrence in Germany.

Second. Colonies infected with foul brood infect the whole house; in single hives, out-of-doors, they may be cured, and the hive disinfected; not so a house, where it is well nigh impossible.

Third. Houses are wax-moth harbors. Such a frost-proof house is the best place imaginable for them to breed to their hearts' content, if I may be allowed that expression.

A celebrated bee-keeper in Germany advises bee-keepers to use hard wood for frames, because if made of soft lumber, the wax-moth larva gnaw and eat them, according to his experience. Now imagine such an army of worms, that they even attack the wood of the frames, being hatched, of course, in all the cracks and crevices of a bee house.

Now, those reports of destruction of bees by fire, foul brood and wax-moth, I found in different papers; not one of them alluded to the disadvantage of bee houses, but by putting the above statements together, one can easily see that these are results of bee houses which are a nuisance, and to be shunned by every thoughtful apiarist. If I remember correctly, Mr. A. I Root lost some of his bees by his bee house getting on fire.

Mr. Heddon built a bee house, but discarded its use, as such, some years ago.

To sum up, bee houses are not desirable on account of expenses, danger from fire, increased danger of contagion of foul brood, when once present, and the increased protection the wax-moth enjoys, especially as the inside of a house will not be frequented by birds to eat them.

Youngstown, O.

* * *

For the American Bee Journal.

Best Summer and Winter Hive.

J. A. WILLIAMSON.

Nearly all admit that a hive with a deep frame will winter bees better than with a shallow frame. This is absolutely true, because the honey is mostly above the cluster, where the heat from the cluster warms and permits them to ascend as they may, from time to time, require more food; but for surplus comb honey, a shallow frame is better so that the surplus arrangement may be near the brood and above the cluster. How shall one manage so that the hive will conform to both of these requirements? I will try to describe one that I have in use that fills the bill exactly. It consists of 2 kinds of frames, one for the brood and the other for surplus. The latter holds 6 $4\frac{1}{4}$x$4\frac{1}{4}$ 1-lb. sections and the brood frame is of the same dimensions, outside measure, so as to be used interchangeable.

The brood-frames hold a comb about 8x13 inches; 16 of these frames are used in the brood-chamber, and 12 of the wide frames filled with sections above, for surplus, and, if desired, two or more below, in each end. The brood-frames have tight ends, $1\frac{1}{2}$ inches wide, and, when clamped together make the brood-chamber 24 inches long. Twelve of the wide frames are clamped together for surplus and put on top, holding 72 1-lb. sections on top and, if we wish, 12 or more in the lower story. Each outside frame is covered with glass or a thin board. In making up our hive for winter, we take away all the wide surplus frames, which hold the sections, below as well as above; we have now left 16 brood-frames in the lower story; take 4 from each end, clamp them together, put them over the 8 left in the lower story.

Our hive now is about 13 inches each way (nearly square), and about 18 inches high, we have them now double, which equals a rack, the combs of which are 17 inches deep. We always find more and better honey at the ends or sides, on the top, or over the cluster. The real brood-chamber is undisturbed which is very important in making up for winter. I have a box or case 4 inches larger than the brood-chamber for packing, for winter. In making up, or dividing in the spring, take 4, 5, or more, brood frames, clamp them together and put them on the bottom board; cover the top of the rack with cloth, or honey-board, if you like.

The above is a description of my notion of a hive for winter combined with large surplus room, etc.

Argenta, Ill.

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For the American Bee Journal.

Foul Brood and other Matters.

J. H. TOWNLEY.

“The difference of opinion as to the probability or possibility of curing foul brood, as stated in the proceedings of the Michigan State Convention, I consider very damaging to the bee-keeping public at large; the more so, when noted bee-keepers disagree on the subject. Mr. C. F. Muth says it can be cured by the use of salicylic acid, while Mr. D. A. Jones asserts he has thoroughly tested it, and found it of no use, indirectly hinting that he has another and surer remedy. From the nature of the disease, I doubt Mr. Jones having had a case of genuine foul brood. Nor will Mr. Townley's remedy stay the progress of the disease among his remaining bees, if it has attacked as many as 60 or 70 colonies, for he could not possibly know what colonies of the remainder had caught the contagion before the disease makes its appearance among the brood.”

The above, taken from the BEE JOURNAL, vol. 18, page 8, has induced me to give briefly some of my own experience with this malady. When it first appeared in my apiary, 5 years ago, there was no known case of the disease, neither has there been since, nearer than 10 miles. Its first appearance was in a colony that had been wintered in a snow-bank. (Digression—After having lost nearly $200. worth of bees by trying to winter them under snow, I know of but one place I would prefer a snow-bank to, and that is a mill-pond). One end of the hive was elevated, perhaps two-thirds of the bees were dead and laid in a mass in the opposite end, wet and rotten; not more than one cell in 10 of the brood would hatch; the remaining cells containing brood, had been capped, the capping was depressed, usually with a hole through it; the brood was dead and lay in the cells a stinking, sickening, disgusting mass, which, if one attempted to remove, would “spin” out in strings several inches in length. This I think was in April. In two or three months several more colonies were found slightly affected.

At first I tried to save what I could of the affected colonies, by putting the bees into clean, empty hives, extracting the honey, melting the combs into wax, and cleansing the hives, covers and stands with fire, as soon as they were found. The bees were first put into an empty box, and after being left there two days they were shaken into clean hives, and what comb they had made was melted into wax. In no case did the disease appear again in the colonies so treated. The objection to it was the liability to spread the disease (it being contagious) to healthy colonies, especially so, if the work was done when bees were flying and were not gathering honey. After my experience with this malady, I think one who has no experience with it would be more than likely to lose by fooling with it in his own apiary, in any way, shape or manner whatever.

I seldom found more than 4 or 5 affected colonies at any one time, but in a few weeks after treating them, as above described, more would be found, so that at the end of the season I was no better off so far as getting rid of the malady is concerned than at its commencement. The next season I made short work of it by either burning, or burying every diseased colony, with all that belonged to it, as soon as it was found. The third year I found only one colony diseased in my apiary of more than 100 colonies. Since then (July, 1879), during the breeding season every colony in my apiary has been overhauled as often as once in from 3 to 6 weeks, the bees shaken from the combs, and the brood carefully looked over without finding a diseased "cell," so that I think I am now entirely rid of foul brood notwithstanding the assertion of Mr. Kohnke to the contrary.

I was very much gratified with meeting Mr. Jones at the Michigan Convention, and listened to his remarks there with a great deal of pleasure. I think he gave us much valuable information and hope he will attend the future meetings of the Association. But, if salicylic acid will cure foul brood, and he has diseased brood in his apiary so much worse than foul brood that the acid will not cure it, I hope he will leave it in Canada; we don't want it in the United States?

In conclusion, although foreign to the subject, we are apt to be too positive in our assertions; to make assertions that we would not make if we knew *all* the facts. Even the best and most experienced apiarists sometimes make not only assertions that they have no facts to prove, but also inconsiderate assertions, that are disproved by the experience of others. Although numerous instances of this kind might be referred to, I will refer to only one—that of Mr. Langstroth, in his letter to Mr. A. I. Root, as published in *Gleanings*, vol. 14, page 319, and afterwards published in the Bee Journal; viz: "In the very cold winter of 1872-73, I wintered in the open air in hives only $\frac{7}{8}$ thick, until February, a number of colonies which were estimated not to have over two quarts of bees per hive. All the bees of a hive were placed between two combs full of honey, which were kept nearly three inches apart, and they formed a single cluster, shaped like a ball. If the combs of these colonies had been left in their summer position, no amount of chaff used in any fashion could have saved them." If Mr. Langstroth had visited my apiary about March 20th, in 1873, and seen me open hive after hive of very much such colonies as he mentions, that had been used for queen-rearing, in 1872, and in which the combs were left in their summer position—colonies so small that they occupied only a small part of two spaces between the combs—only one comb running through the cluster of bees; and all of them successfully wintered on their summer stands packed in chaff, he never would have made the above assertion.

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For the American Bee Journal.

Is Parthenogenesis Proven?

J. W. K. SHAW.

While awaiting the arrival of the "Apis Americana," permit a *puer Americana* to dissect an article by Dr. W. R. Howard, in the Bee Journal for Sept. 14, 1881.

I also deny (with Mr. Robinson) that parthenogenesis is a fact proven in nature. All admit that the queen bee is not bi-sexual; therefore all her eggs must be fertilized by the spermatozoa of a male to produce fruitfulness. This is the rule in nature, whether in human, animal or insect life. When once they are bi-sexual, they ever remain so. No embryo can start into existence without the interposition of the spermatozoa of the male, even in bi-sexual insects. Asexual, *i. e.*, without sex, is not a law of nature. Agamic, *i. e.*, without marriage, or agamous, is applied only to vegetable life, as having no visible organs of fructification. There is, and can be, no budding process in the re-production of animal or insect life; all are furnished with the organs of re-production, bi-sexual and sexual, for the preservation and procreation of their species.

A budding process in jelly fish, is only the development of a bi-sexual, and not of an agamic process, or asexual, if you will. Asexual is contrary to all laws of nature, in insects, animals or fish, and is confined to botanology alone. Asexual, having no visible organs of generation.

He also says "it is impossible to draw any absolute lines of demarcation between ova and buds." Such a line is not necessary; nature in all its workings, points with an unerring finger, as absolute and unchangable as the hand which directs the movement with unerring wisdom, and provides for all, through and by general laws, established to germ productive nature. Again he says: "Eggs that you wish to hatch must be left to the care of the bees." No egg in our apiary will hatch if they do not care for it. To produce a perfect female, or queen bee, they build a special cell for it, and feed it with royal food; they build for the drone, or male, a special cell also. Can any one say they have no especial food for the male bee? Neuter cannot be applied to the worker bee, for they are undeveloped females; they, too, have a different cell, and who is able to prove that the bees do not feed the workers with a special worker food. When it is so hard to prove where truth lies hidden, it is easy to say: "We pin our faith to the skirts of scientists." But are they not human? Being human, they are fallible! And since parthenogenesis is a myth, and in no conclusive manner a reality, and since reproduction of the species is the production of living individuals by actual congress of the species, I wish that "good common sense," common to all "enlightened, intelligent apiarists," may seek for a solution of the mystery in that well "where truth lies hidden," and be not astonished if you find at the well—the *puer Americana!*

Loreauville, La.

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For the American Bee Journal.

Bee-Keeping as an Occupation.

WM. CAMM.

It seems not only possible, but practicable, to meet bad seasons by judicious sowing and planting for honey. An attempt to examine colonies with a view of transmitting you a report, last September, was frustrated by robbers. I commenced the winter with 29 colonies, 3 being Cyprians, and 2 Syrians. The little experience I had with these bees was favorable, especially with Syrians.

Bee-keepers have no more reason to be discouraged than those following other rural occupations. Wheat was comparatively a failure; corn was badly injured by drouth, and on clay lands, where the juices contained more sugar, the chinch-bug played havoc with it. Many, to save what they did raise cut up all their corn, and then came the soaking warm rains and spoiled that. Where corn was good the cholera has killed hundreds of hogs to which it was being fed. Bugs, insects and drouth, so injured the vegetables and fruit, that one is hardly surprised to hear of cabbages being imported from Holland, potatoes from Ireland and beans from Italy.

Had I been able to Italianize in 1879 I should, in spite of the season, have gotten about 100 lbs. per colony. The drouth had continued so long that I felt sure of copious rains in summer and destroyed my black queens just as white clover came in, and the drouth stopping the secretion of nectar suddenly, bees were very perverse in raising queens and in receiving those bought, so that several were destroyed after laying one or two weeks; this made it necessary to draw upon my few Italians continually. Started with 21 colonies; took no honey but changed all black for yellow queens and increased 8 colonies.

Murrayville, Ill.

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☞ The Indiana State Bee-Keepers Association is called to meet in annual session, Wednesday and Thursday, Jan. 24 and 25, 1882, in the rooms of the State Board of Agriculture. By order of Executive Committee.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Jan. 24, 25—Indiana State, at Indianapolis, Ind.

25—Northeastern, at Utica, N. Y.
Geo. W. House, Sec., Fayetteville, N. Y.

Feb. 1, 2—N. E. O. & N. W. Pa., at Jamestown, Pa.
W. D. Howells, Sec., Ashtabula, Ohio.

April 11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May — Champlain Valley, at Bristol, Vt.
T. Brookins, Sec.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

N. W. Wisconsin Convention.

The Northwestern Wisconsin Bee-Keepers' Association, met at La Crosse, Wis., on January 2, 1882. In the absence of the President the Vice President called the meeting to order at 2 p.m. The Secretary then made a verbal report of which he was to furnish a copy, for the next meeting. The Treasurer's report was read and ordered filed.

The following were elected officers for the ensuing year:

President, Emanuel Markle; Vice Presidents, J. Petty and Wm. Lossing; Secretary, G. J. Pammel; Treasurer, John A. Salzer.

A motion was made to amend Art. 3 of the Constitution so that it shall read as follows: The officers of this Society shall consist of President, two Vice Presidents, Secretary and Treasurer, whose duties shall be those usually assigned such officers, and their term of office shall be one year or until their successors shall be elected. Carried. Mr. Wm. Lossing was then elected 2d Vice President.

Upon motion, the President appointed a committee of five to try and get a good attendance at the next meeting, viz: W. Lossing, H. Sanders, E. A. Morgan, E. Markle and L. Peters.

Mr. Salzer said he did not know why the bees killed his queens (bought in the Harris mailing queen cages), after being released.

Mr. Markle said that 44 hours before he had introduced the new queen, he killed the old one and put the cage with the new queen on top of the frames in the hive, and in 48 hours the new queen was accepted, and that he had not yet lost a single queen in that way.

Mr. L. H. Pammel explained how to introduce queens with the Harris mailing queen cage; it was substantially the same as the instructions on the cage, and said that he believed it to be the cheapest and best in use. Considerable discussion followed.

Mr. Markle said that queens can become imperfect by rearing too many from one mother, and referred to some cases. After debate it was decided in the negative, and that the fault was in the method of introducing and handling the queens.

Question. "Are the cells that are lengthened to form queen-cells, after the eggs are deposited made expressly for that purpose, before the eggs are deposited by queen, or is it simply a worker cell lengthened?" Those present came to no conclusion, although four-fifths of them believed them to be lengthened worker-cells.

Upon the question: "Do worker bees lay eggs" the members came to no conclusion.

An article was read from the BEE JOURNAL on the subject "How to get rid of fertile workers" by E. A. Thomas, to throw light on the above subject, and a great deal of interest was manifested.

L. H. Pammel read a paper on "Bee-keeping as it was."

The following resolution was then adopted:

Resolved, That we the members of the N. W. B. K. Association tender a vote of thanks to the City Council for the use of City Hall and to the papers that published a free notice of the meeting. Adjourned.

G. J. PAMMEL, *Sec.*

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S. W. Iowa Association.—Every man who ever contemplates keeping one colony of bees should take the BEE JOURNAL, to know what his brethren are doing, and do likewise. There are several important factors in bee-culture; the first and most important of these is the man himself; 2. The queen; 3. The extractor; 4. Comb foundation; 5. A convenient hive. I will not take your time and valuable space in commenting upon each one of these points, only that of the man, because if the man who contemplates keeping bees will only take one or more of the bee papers, and read it, he will soon learn the importance of the other improvements. A man, to be successful in bee-culture, must accept of the improvements, take and read the papers, and never neglect his bees any more than he would his horses, cows, hogs or sheep; and then there is less risk with bees than either of the others, and a much greater percentage of profit. You have not had a report from the Southwestern Iowa Bee-Keepers' Association. It rained all day Sept. 29. My wife was taken suddenly sick, consequently all discussion was abandoned, and but little business transacted. A committee was appointed to award prizes, consisting of Messrs. Leonard, of Taylor County, and Round and Nichols of Adams. L. E. Mercer, of Taylor County, was awarded a premium of one colony of Italian bees, and Frederick Bedinger, of Adams County, one colony of Italian bees. The old officers were all re-elected. The President is to give notice through the BEE JOURNAL of the time and place of the next meeting. A few reports were handed in as follows: The Rev. James M. Rees, of Lenox, reported he bought 2 colonies of bees of L. E. Mercer, in the spring; increased to 7; took 50 lbs. of comb and 77 lbs. of extracted honey, and left plenty for the bees to winter on. Fife's apiary about the same; Mercer's about the same. Season was poor, but all who used the extractor done well. JAMES T. FIFE.

Corning, Iowa, Dec. 31, 1881.

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The Northeastern Bee-Keepers' Association will hold their twelfth annual convention in the Common Council Halls, at Utica, N. Y., on the 25th, 26th, and 27th days of January, 1882. The executive committee are determined to maintain the high standing and enviable reputation the association has justly gained in the past, and propose to outdo all former efforts on this occasion. From present indications the coming convention promises to be the largest and most interesting ever held in America. New features will be introduced, and business of vital importance will be brought before the convention that makes it the duty of every member and bee-keeper to attend. Essays and addresses are expected from Capt. J. E. Hetherington, W. L. Tennant, L. C. Root, James Heddon, Chas. Dadant, T. G. Newman, N. N. Betsinger, Dr. A. H. Marks, and others of America's renowned apiarists, on the most interesting topics of the day. If you wish to enjoy the benefits to be derived from the good work already in progress by this association, you will surely attend. All are invited; none can afford to remain at home. Articles and implements of the apiary for exhibition, etc., should be sent to the Secretary, at Utica, N. Y., who will take personal charge of the same and arrange all articles so as to compare favorably with others on exhibition.

DR. A. H. MARKS, *Pres.*

GEO. W. HOUSE, *Sec.*

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The N. E. Convention.—"The Great Light on Wintering Bees, Cause and Prevention of Dysentery," was the subject chosen by me on which to deliver an address before the Northeastern Bee-Keepers' Association. Unintentionally the last half of the title of the subject was omitted in the notice. Those desiring to attend this Convention should remember that a thousand miles is a short distance, compared with the knowledge that they will gain upon this subject alone. I shall try to be present, with samples of excrement from colonies in a healthful state, and also those affected with dysentery, which will be fully illustrated, giving cause and prevention.

N. N. BETSINGER.

Marcellus, N. Y., Jan. 10, 1882.

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☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. DEMAREE, *Sec.*

Christiansburg, Ky.

SELECTIONS FROM OUR LETTER BOX

Wiring Foundation.—What weight of comb foundation will do to use with wires, and how large should the wires be? Will Olm's No. 4 machine make foundation that will do for brood comb? E. F. TAYLOR.
Canton, N. Y., Dec. 20, 1881.

[About five feet to the pound is best for wiring, or without. Use No. 36 tinned wire. We suppose Olm's No. 4 machine will make foundation suitable for brood chamber, if your frames are not too large. You can correspond with him and learn full particulars as to size of sheets made.—ED.]

Wintering Bees in Texas.—We have had no cold weather this winter. Mustard, turnips, lettuce, garden peas, radishes, cabbage, and in fact nearly all kinds of garden vegetables, are growing here now from seeds scattered in autumn. Mustard and peas are commencing to bloom, though I think a little freeze would put an end to some of them. This is the first winter that I have had to feed my bees. I am feeding about 20 colonies, some of my strongest colonies that I am feeding have brood in all stages, though only on one or two combs. There are no signs of disease, as they have had an opportunity for flight every few days. I wish the WEEKLY BEE JOURNAL success.
WM. R. HOWARD.
Kingston, Tex., Jan. 6, 1882.

Italianizing and Transferring.—I have 9 colonies of Italians and 3 colonies of hybrids, if they live until spring. Would you advise me to Italianize my hybrids? How is best to transfer from a large frame to a smaller one? I want them all in one sized hive. A. L. BAKER.
Lansing, Mich., Dec. 25, 1881.

[Yes; Italianize all of them. Any time in early spring will do to transfer them, and the job will be easily performed, as you have only to cut down larger combs to fill smaller frames. Trimming will be done at ends and bottoms to save the brood, and the pieces can be fitted in frames and thrown to the outside, where they will not interfere so much with brood-rearing, and soon as filled with honey can be lifted out for winter stores; or the pieces can be thrown in the waste box, and melted up for wax.—ED.]

Bees Prosperous.—My bees wintered well. I lost only 4 colonies out of 30; I increased them to 50 and obtained over 1,000 lbs. of honey in sections, which I sold at 20 and 25 cents per pound. M. E. MASON.
Andover, O., Jan. 2, 1882.

Extracting.—Please answer the following questions in the BEE JOURNAL: 1. I have 11 colonies in Langstroth hives, half of them blacks, and half of them pure Italians. I wish to run 4 colonies for the extractor, and the rest for sections. Which bees will do the best in the section boxes, the blacks or Italians? 2. How shall I proceed in fitting my double-story hives for extracting? Fill each upper story with 10 frames of foundation, and put them on when it is time to put on surplus boxes, or shall I "hook" out two or three empty combs from each of my hives, in apple blossom time, replacing with foundation, and thus get empty combs to fill the upper story? 3. Shall I put on the upper story full of combs at the time when I put on sections? D. D. MARSH.
Georgetown, Mass., Dec. 27, 1881.

[1. Run the blacks for box honey; they will do nearly or quite as much work in the boxes as the Italians, while the latter are better to handle around the extractor, and not so easily discouraged by being robbed so frequently. 2. Fill your second stories with straight combs, selected from the brood chambers of the other hives, for extracting, supplying their place with foundation. 3. Put on the upper story full of combs soon as honey begins to come in freely from any source.—ED.]

A Good Showing.—In the spring of 1881, I had left only 18 colonies; I sold 3, leaving me 15 to begin the summer with, and some of them were very weak. I increased them by natural swarming to 44, after selling 5 first swarms.

To bees sold....................	$60 00
Comb honey, sold at 20c.......	284 20
Extracted, at 15c...............	25 00
Increase, 29 colonies, at $7....	203 00
Total........................	$572 20

My bees are in good condition for winter. They had a good fly on Christmas. They are wintered on the summer stands, packed in fine hay. Allow me to congratulate you, Mr. Editor, upon your success with the Weekly BEE JOURNAL. I hope you may still prosper, and keep the old reliable AMERICAN BEE JOURNAL at the head of all bee papers of the World. JOHN BAXTER.
Pickering, Ontario.

A Good Investment.—Bees are flying to-day. I bought 3 colonies in the spring of 1881; increased to 5; sold comb honey for $6.50. I think my two extra colonies are worth $8.00, and this with the $6.50, makes $14,50, clearing myself in one season, which I think pretty good for a green hand.
F. B. MCQUEEN.
Brownhelm, O., Jan. 7, 1882.

Cold.—The mercury stood at 18° below zero here yesterday morning.
G. M. DOOLITTLE.
Borodino, N.Y., Jan. 6, 1882.

The Pollen Theory.—I went into winter quarters in the fall of 1880, with 19 colonies of bees; put in cellar 15 hives, left 4 on summer stands, well protected; 2 of them were movable comb hives and 2 box hives. The bees in 2 movable comb hives and one box hive died with dysentery. Two of those in the cellar died with dysentery, 1 with mice, and 3 of them died after setting them out; 1 was robbed, and 1 dwindled. So you see I came out with 8 colonies. There was about 2 quarts of pollen in the box hive where the bees died. I think too much pollen killed the bees; my reason is this: I had 5 or 6 colonies in the cellar with little or no pollen in the combs, and they came through all right and clean. Those that had no pollen were second and third swarms, and one first. Some of these were among my best colonies. One of these third swarms gave 115 lbs. of honey, all basswood, so I cannot see what is the good of so much pollen in the hives. If bees can get much pollen in the fall, they will gather more than is good for them. My bees gathered a great quantity of pollen in the fall of 1880; this fall they have gathered very little. Some localities produce more pollen than others, just as some localities produce more honey than others. I am one of the number that stands 10 to 1 on Mr. Heddon's theory. I will give the result of the season's work: Obtained 400 lbs. of extracted honey, and 300 lbs. of comb honey in 2 lb. sections, and could have obtained 100 lbs. more if I had had time to attend to them. The fall wheat harvest began before the basswood was over, and I had to attend to it. I sold the comb honey for 20 cts. per lb., and the extracted for 15 cts. Send along the BEE JOURNAL, as I cannot get along without it, for it is a very welcome visitor. WILLIAM COLEMAN, JR.
Devizes, Ont., Canada, Dec. 12, 1881.

Deserted by the Queen.—My 37 colonies of bees were put into winter-quarters Nov. 1st, all strong with bees, plenty of honey, and all right with young queens. Yesterday evening I found one of my queens in front of the hive with a few bees around her, about dead. I examined the colony, and found them in good condition minus the queen. Would like to know the cause of the queen coming out at this time of year.
W. R. THOMSON.
New Iberia, La., Jan. 4, 1882.

[We cannot give a reason for the queen deserting the hive with so few bees attending her, unless she was driven out by robbers, or, not having been fertilized, took advantage of a fine day to fly out to mate.—ED.]

The Wrong Man.—I notice in the BEE JOURNAL, page 21, remarks quoted as coming from me, which should have been credited to some one else. If I remember rightly it was Dr. Ashley, of Ann Arbor.
L. C. WHITING.
East Saginaw, Mich., Jan. 11, 1882.

Unprolific Queen.—I have been greatly benefitted by the Bee Journal in the past and expect much profit from it in the future. I have 21 colonies of bees in my cellar, packed with quilts around the brood chamber and straw over the quilts. Bees have not done very well this summer, owing to cold and cloudy weather in the spring. I tried to Italianize my bees this summer but failed. I bought a queen which was introduced to a colony, and was accepted, but she did not lay. I gave them a frame of brood and fed them 8 or 10 days, but she did not lay an egg. What do you think was the cause? Do you think she will do better next spring? Please answer through the Bee Journal.

Charlie W. Bradish.
Glendale, N.Y., Dec. 24, 1881.

[It was probably quite late when you introduced her, and she did not recover from her imprisonment and change in location in time to lay last fall—though she should have done so, even if but little. If she does not show early signs of prolificacy in the spring, you will find it profitable to supersede her; we think she does not amount to much.—Ed.]

Mild Winter.—The winter so far has been very mild, just cold enough so that bees would not venture out of their hives; the lowest dip was 12°, highest 40°; on Christmas day the mercury ran to 45°, and the bees flew some at noon. Monday and Tuesday it rained continually; Wednesday was warm as summer, and the bees had a splendid fly, and are now in nice condition for the remainder of the winter. I commenced the season with 20 weak colonies and bought 9 the last of June —4 old and 5 new swarms; lost one in getting them home; have 50 now, 45 of which are in chaff hives on their summer stands, 5 in single-wall hives in the cellar, all in good order. Have obtained 2,000 lbs. of comb and 250 lbs. of extracted honey, which is nearly all sold at home at 16 to 20c. for extracted. I have reared 40 Italian queens. I have taken the Bee Journal for the last 10 years, and think it is cheaper now than ever before. It is indispensable to bee-keepers.

J. H. Kennedy.
Little York, N.Y., Dec. 31, 1881.

In the Cellar.—Last winter I put 29 colonies in the cellar, Dec. 9; I did not bother them through the winter. The cellar was ventilated with 4-inch pipes, one running through the ground to carry in fresh air, and one running up through the center of the floor to carry out foul air, both running down within 3 inches of the bottom; had slaked lime scattered all over the bottom to absorb the moisture. The cellar was perfectly dark. I took the bees out the 15th of April; all dead but 13 colonies, and they were weak and moldy. The 20th of June I divided them all once; I built up all of them with the combs of the dead bees, which had lots of honey in them. About the 1st of August I had 3 natural swarms, which made me 29 in all. They did not get much honey until about the 15th of August, when we had a splendid flow; then I put on 2-lb. section boxes on part of the hives, and second stories on 8 hives, with 10 frames in the second story, full of foundation. The rest of them I extracted. I got 1,000 lbs. of extracted honey, and 600 lbs. of comb honey. I have sold nearly all of it for 20 and 25 cts. per lb. My bees are in good condition for winter, on their summer stands.

Geo. W. Stark.
Holmesville, Neb., Dec. 25, 1881.

Production of Comb Honey.—I want to know what frame and section to use to get the largest amount of comb honey.

C. A. Pontius.
Canton, O., Jan. 10, 1882.

[A shallow frame is considered much the best for comb honey, because of giving the bees less labor to climb up to the sections, and giving larger section surface above the frames. As much honey can be obtained in 1 and 2 lb. sections as in a larger box, but, of course, the smaller the section, the more attention will be required in taking away or tiering up promptly during a plentiful honey flow.—Ed.]

All that Could be Desired.—The first number of the Journal for 1882 is at hand, and has been perused with usual interest. I am much pleased with its present form. It is surely all that could be desired. I was a little fearful one year ago that the Weekly would not receive the patronage that it deserved, and sufficient to make it pay. I now predict for it a very bright future. You have labored faithfully to make it what it is to-day. Success to your efforts.

F. A. Snell.
Milledgeville, Ill., Jan. 11, 1882.

Dwindling.—I think the bees are wintering quite well, so far. We have had plenty of warm days and the bees have had quite a number of good flights. This necessarily implies some dwindling, as I have found quite a number clinging to fences, etc., which are certainly lost. I did not have time to attend to my bees the past season; they did well early in the season, at which time I missed the golden opportunity to extract. I had 16 colonies left out of 32, in a very poor condition. I transferred 8 into Langstroth hives, increased 3 by natural swarming, lost 1 entirely by excessive heat melting down combs, had 4 or 5 queenless, and a bad time generally to build up. I now have 18 colonies, 13 of which are in good condition, all on the summer stands, with blankets over the frames—plenty of honey for stores, and about 100 lbs. of surplus honey in $4\frac{1}{4}$x$4\frac{1}{4}$ sections. I had poor success in either side or top storing. I expect to lose some of my colonies in the spring, because I have too many old queens and cannot prevent spring dwindling, unless I can get early brood. I intend to Italianize all my colonies if possible, and be better prepared for the coming year. I am trying to introduce bee pasturage, and hope to succeed. I am well pleased with the new style of the Bee Journal. It is just the thing for convenience; although not intending any flattery, yet I must say each successive change improves it in every sense. You have indeed struck the key-note, if I am any judge of bee journalism. I wish you a happy and prosperous year.

F. A. Grove.
Kirkville, Mo., Jan. 12, 1882.

Is there Danger of Smothering?—I have the hives with my 12 colonies of bees set in a row, with 12 inches straw on the sides, and 6 or 8 inches of slough grass on top, some ventilation at the top, and an air space 2 inches high in front, at the bottom. I have been told that they would smother; is there danger of it, and should I remove part of the covering? There are no dead bees at the entrance.

A. Hodges.
Shenandoah, Iowa, Jan. 10, 1882.

[If you have even a slight upper ventilation, with the air-space you mention below, they cannot smother; but they may become so warm as to create uneasiness. Should this occur they will gather around the entrance in great numbers; until then, let them alone.—Ed.]

The Last Prize Queen.—It is due to Mr. Charles H. Lake, of Baltimore, Md., to say that after the prize was awarded to Dr. I. P. Wilson, of Burlington, Iowa, I received the sixth and last queen bee, that became a contestant for the prize from Mr. Lake in a nucleus hive, with two full-sized frames, and about a quart of bees, the progeny of the queen which he forwarded. The queen herself was not as large as the Wilson queen, nor perhaps as bright a yellow color; but the bees were very large and bright-colored, and the gentlest which I ever handled. Not one even threatened war upon me, though I took them out of the hive on two or three occasions. At the same time, if a stranger bee came sneaking about, he was instantly seized and treated without mercy. The queen filled 3 frames about $\frac{2}{3}$ full of brood after she was inserted in a larger hive, and went into winter quarters in first-rate order.

E. L. Briggs.
Wilton, Iowa, Nov. 28, 1881.

Canadian Opinion.—As one of your Canadian readers I write to express my high appreciation of the change made this year in the Journal. For present reading as well as future preservation the size, stitching, and cutting the leaves is a very great convenience, and very much enhances its worth.

J. Carswell.
Adelaide, Ont., Jan. 10, 1882.

☞ The Northeastern Ohio and Northwestern Pennsylvania Bee-Keepers' Association, will meet at Jamestown, Penn., Feb. 1, 2, 1882.

W. D. Howells, *Sec.*

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

RATES FOR ADVERTISING,

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words;** fourteen lines will occupy 1 inch of space.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance :

For **4** weeks		**10**	per cent.	discount.
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Transient Advertisements payable in advance. —Yearly Contracts payable quarterly, in advance.

THOMAS G. NEWMAN,
974 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

* * *

The Apiary Register devotes 2 pages to each colony, ruled and printed, and is so arranged that a single glance will give a complete history of the colony.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

* * *

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

Honey and Beeswax Market.

BUYERS' QUOTATIONS.

OFFICE OF AMERICAN BEE JOURNAL, }
Monday, 10 a. m., Jan. 16, 1882. }

The following are the latest quotations for honey and beeswax received up to this hour :

CHICAGO.

HONEY—The market has an upward tendency. Light comb honey, in single comb sections, 18@22 cents ; in larger boxes 2c. less. Extracted, 8@10c.

BEESWAX—Prime quality, 18@22c.

AL. H. NEWMAN, 972 W. Madison St.

CLEVELAND.

HONEY—The market since Jan. 1st has revived considerably ; best No. 1 white, in 1 and 2 lb. sections, now sells at 20c@22c.; buckwheat dull at 17@18c. Extracted, in small packages, 12c.; in half bbls., 11c.

BEESWAX—22@25c., and very scarce.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—No life observable in this market. The unfavorable prospect thus far for a prolific yield this season has not stimulated the demand in the least. A sale of 58 cases dark extracted at 8c. is reported.

We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8¾@10c.; dark and candied, 7@8c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

NEW YORK.

HONEY—The supply is full, and trade is lively. We quote as follows : White comb, in small boxes, 18@23c ; dark, in small boxes, 15@17c. Extracted, white, 10@11c.; dark, 9@10c.

BEESWAX.—Prime quality, 21½@23c.

THORN & CO., 11 and 13 Devoe avenue.

BOSTON.

HONEY.—1-pound combs are a desirable package in our market, and a large quantity could be sold at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—Plentiful and slow for all save choice bright comb -this sold readily; comb at 18@23c.; strained and extracted 9@11c. to 12½c.—top rates for choice bright in prime packages.

BEESWAX Selling lightly at 19@20c.

R. C. GREER & CO., 117 N. Main Street.

CINCINNATI.

I pay 8@11c. for extracted honey on arrival, and 16@18c., for choice comb honey.

BEESWAX.—18@22c., on arrival. I have paid 25c. per lb. for choice lots. C. F. MUTH.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club :

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

To Promote a Vigorous Growth of the hair, use Parker's Hair Balsam. It restores the youthful color to gray hair, removes dandruff, and cures itching of the scalp. 1w4t

CLUBBING LIST FOR 1882.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal (T.G.Newman)	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00 .	2 60
Bee-Keepers' Instructor (W.Thomas)	2 50..	2 35
The 4 above-named papers.......	4 50..	4 00
Bee-Keepers' Exch'nge (Houck & Peet)	3 00..	2 80
Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper..................	2 60..	2 40
The 7 above-named papers.......	6 30..	5 50
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) ..	2 40..	2 25
Binder for Weekly, 1881...............	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

◆

☞Thousands have used Kendall's Spavin Cure for rhuematism after all other remedies had failed, and have experienced instant relief. 1w4t

◆

"**How do You Manage,**" said a lady to her friend, "to appear so happy all the time?" "I always have Parker's Ginger Tonic handy," was the reply, and thus keep myself and family in good health. When I am well I always feel good-natured." See other column. 1w4t

BEES for SALE.

I have for sale about **300 Colonies** of the

Celebrated Arkansas Brown Bees,

which I will dispose of in lots of TEN COLONIES OR MORE at very reasonable prices. They are in ten-frame Langstroth and box hives. These bees are said to be large, remarkably amiable, good section workers, and excellent comb builders. Owing to the mildness of the Arkansas winter, they will be very strong in bees, and spring dwindling will be avoided. These bees can be delivered on board steamer, near Memphis, before the middle of March, and before the early honey flow and swarming commences. Write soon for bargains, as I will close out both my Southern Apiaries by March 15th, or remove them North.

I am also booking orders for Italian Queens, Nuclei and Colonies, to be supplied from Chicago in June. Address,

ALFRED H. NEWMAN,
972 West Madison St., CHICAGO, ILL.

EVERY ONE NEEDING ANYTHING

in the line of **Apiarian Supplies**, should send for my Descriptive Circular and Price List. Sent free. Address, F. A. SNELL,
3w13t Milledgeville, Carroll county, Ill.

J. V. CALDWELL,

CAMBRIDGE, ILL.,

Wants every reader of the good old AMERICAN BEE JOURNAL to send his name and Postoffice address for a copy of his new Illustrated Circular of Bee-Keepers' Supplies. It may pay you to read it before ordering your supplies.

☞ Beeswax wanted. 3w26t

A FEW LEFT—24-page Report of Michigan State Bee-Keepers' Convention (in pamphlet form), containing **10 Valuable Essays** and current Discussions. Sent on receipt of **10 Cents.**
3w1t Address, T. F. BINGHAM, Abronia, Mich.

PRIZE QUEENS FOR 1882,

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates : Tested Queens, $3 ; Warranted Queens, $2 ; Queens without guarantee, $1 ; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

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WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
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GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen	$4.50
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Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1	2.50
" " per half doz., after July 1	13.50

Address, by Registered Letter or Postoffice Order,

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1wtf Burlington, Iowa.

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If you desire the benefit of an experience which has enabled us to secure 32,809 lbs. of honey from 160 colonies of bees during the present season, send for our book. It contains 270 pages, with 100 illustrations, and is fully up to the times. Price, by mail, **$1.50.** We sell everything used in advanced bee-culture. Send for our illustrated circular.

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46smtf MOHAWK, NEW YORK.

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Stanley's Vandervort Foundation

for sections is **"even thinner than natural comb, and is the very best foundation made."** See BEE JOURNAL of Jan. 3, and *Gleanings* for Jan., pages 14, 15. We also make high-walled Vandervort foundation for brood chamber to fit any size frame. Send for samples and prices, or send $10 for 20 lbs. 10 sq. ft. per lb., to
3sm4t G. W. STANLEY & BRO., Wyoming, N. Y.
5 per cent. on orders of 10 lbs. or more before February 1st.

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Devoted entirely to the best interests of those who keep bees. The question department, conducted by Dr. Wm. R. Howard, is of especial interest to beginners in bee-culture. Jas. Heddon will write a practical article for every number for 1882; 20 pages handsomely gotten up in book form. Every number worth the price of a year's subscription. Sample copies and premium list free to any address. Agents wanted. Address,

SCOVELL & ANDERSON,
28wtf Columbus, Kansas.

Bees and Queens

FULL COLONIES of ITALIAN BEES,

From my Apiaries.

QUEENS and NUCLEI IN SEASON.

☞ Satisfaction guaranteed. Circular on application.
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Inventor and Sole Manufacturer of

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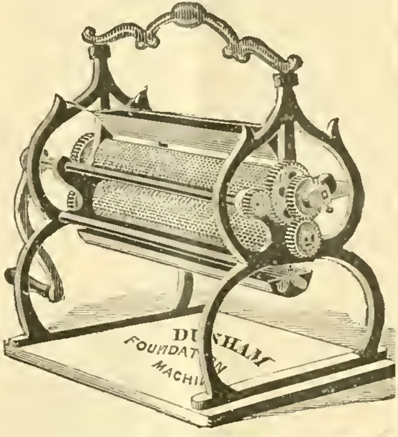

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Having obtained LETTERS PATENT Number 246,099 for Dunham Foundation Machine, making comb foundation with base of cells of natural shape, and side-walls brought up to form an even surface: also on the foundation made on said machine, I hereby give notice to all parties infringing my rights, either by manufacturing said machines or foundation, as well as to all parties purchasing machines as above, other than of my manufacture, that I am prepared to protect my rights, and shall prosecute all infringements to the full extent of the law.

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2w13t DePere, Wis.

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NEARLY A MILLION SOLD. Most complete book of its kind ever published. Gives measurement of all kinds of lumber, logs, and planks by Doyle's Rule, cubical contents of square and round timber, staves and heading bolt tables, wages, rent, board capacity of cisterns, cordwood tables, interests, etc. Standard book throughout United States and Canada. Ask your booksellers for it. Sent for 35 cents post-paid.

G. W. FISHER, Box 238, Rochester, N.Y.

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Ginger, Buchu, Mandrake, Stillingia, and many of the best medicines known are combined in Parker's Ginger Tonic, into a medicine of such varied powers, as to make it the greatest Blood Purifier and the **Best Health & Strength Restorer Ever Used.**

It cures Rheumatism, Sleeplessness, & diseaess of the Stomach, Bowels, Lungs, Liver & Kidneys, & is entirely different from Bitters, Ginger Essences and other Tonics, as it never intoxicates. Hiscox & Co., Chemists, N. Y.

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The Best, Cleanest, and Most Economical Hair Dressing. Never fails to restore the youthful color to gray hair.

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DODGE'S BEE-FEEDER.

Sample, by mail, **30c.**; per dozen, by express, **$2.** Catalogue and Price List of Bee-Keepers' Supplies, Small Fruits and Early Vegetable Plants, free to all on application. **F. E. DODGE,**
2w4t Fredonia, N. Y.

The Bee-Keeper's Guide;

OR,

MANUAL OF THE APIARY,

By A. J. COOK,

Of Lansing, Professor of Entomology in the
State Agricultural College of Michigan.

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320 Pages; 133 Fine Illustrations.

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This is a new edition of Prof. Cook's Manual of the Apiary, enlarged and elegantly illustrated. The first edition of 3,000 copies was exhausted in about 18 months a sale unprecedented in the annals of bee-culture. This new work has been produced with great care, patient study and persistent research. It comprises a full delineation of the anatomy and physiology of the honey bee, illustrated with many costly wood engravings—the products of the Honey Bee: the races of bees; full desccriptions of honey-producing plants, trees, shrubs, etc., splendidly illustrated—and last, though not least, detailed instructions for the various manipulations necessary in the apiary.

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Read the following opinions of the Book:

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I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—*British Bee Journal.*

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYNKOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

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With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—A. E. WENZEL.

My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—WM. VAN ANTWERP, M. D

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Buletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To al taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

—:o:—

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THOMAS G. NEWMAN,
974 West Madison Street, CHICAGO, ILL.

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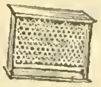

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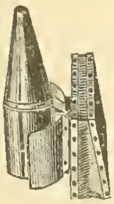

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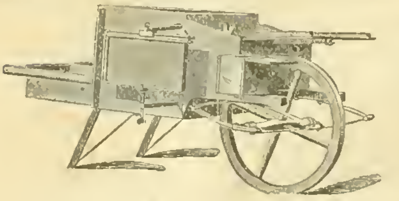

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Novice's ABC of Bee-Culture, by A. I. Root —This embraces "everything pertaining to the care of the honey-bee," and is valuable to beginners and those more advanced. Cloth, **$1.25**; paper, **$1.**

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Wintering Bees. — This contains the Prize Essays on this subject, read before the Centennial Bee-Keepers' Association. The Prize—$25 in gold —was awarded to Prof. Cook's Essay, which is here given in full. Price, **10c.**

The Hive I Use— Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. This contains many useful hints.—Price **15c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

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TOPICS PRESENTED THIS WEEK.

Editorial—

Items ...49, 51
Vernal 49
New Catalogues and Price Lists 49
Tardy Bee Papers 49
Suggestions about Conventions 50
Honey Making in the United States 50
Honey Wine 50
Glucose Syrups and Honey 51
New Bee Feeders 51

Among Our Exchanges—

Small Packages for Honey 51
Organization 51
Poor Management of the Apiary 51
Bee Literature 51
Driven off by Bees 51

Correspondence—

The Dzierzon Theory 53
Another Bee Enemy 53
Moving Bees in Winter 54
Section Honey Boxes 54
Extracted Honey—No. 2 55
Foul Brood Disease—A Review 56
The One-Piece Sections 56
Report from my Apiary 57
Preparing Bees for Winter 57
Pollen and Feces 58

Convention Notes—

Austro-German Convention 59

Selections from Our Letter Box—

Flights in Winter 60
Syrian Bees 60
What Ails My Bees? 60
Timber for Sections 60
My First Year's Experience 60
Box-Hive Men not Progressive 60
Well Satisfied 60
Fall Honey for Winter 60
Moving Bees Over Rough Roads 61
Bees in Sawdust Cellar 61
White and Sweet Clovers 61
Bees in Maryland 61
Bricks as Absorbents 61
How to Get Dead Bees Out of Combs 61
Doing Nicely 61
Merits of Hives for Wintering 61
Dodge's New Feeder 61

☞ Single copies of the JOURNAL sent postage paid for 5 cents each.

Vernal.—Mr. J. W. Winder, Thibodeaux, La., under date of Dec. 30, 1881, sent us his "New Year's greeting," accompanied with a small package of green peas and blossoms, magnolia, orange and oak leaves, and rose buds and flowers, all gathered from open grounds. He writes they had ice two November mornings—none since. Truly, in that land of sunshine,

"December is pleasant as May."

It will be remembered, in February last Mr. Winder sent us white clover and other blossoms and foliage, while we yet remained snow and ice-bound in this Northern climate for several long, discouraging weeks.

New Price Lists Received.—The following New Price Lists of Bees, Apiarian Supplies, etc., are received:

Houck & Peet, Canajoharie, N. Y.
J. V. Caldwell, Cambridge, Ill.
James Heddon, Dowagiac, Mich.
C. H. Deane, Mortonsville, Ky.
Wm. W. Cary & Son, Coleraine, Mass.

Also the following Catalogues of field, garden and flower seeds:

Joseph Harris, Rochester, N. Y.
Cole & Brother, Pella, Iowa.
E. R. Roe, Cornwall-on-the-Hudson, N. Y.

Vick's Floral Guide, by James Vick, Rochester, N. Y., which is one of the most handsomly illustrated and printed pamphlets in the world. Send for them all, they are well worth possessing.

The *Bee-Keepers' Guide* was enlarged with the December number and presents a neat appearance. Mr. A. G. Hill, its editor and proprietor, is getting up quite a spicy paper. It is published at Kendallville, Ind.

The Tardy Bee Papers.—We have just received the Nov. number of the *American Bee Keeper*. Its editor, Mr. E. M. Harrison, explains the delay in its issue, and promises the December and January number in a week. The tone of the paper has improved during the past few months, and we hope that inasmuch as it is to have a "new dress" of type, it may enter upon a *new* career of usefulness, and devote itself to the promotion of scientific apiculture.

The *New England Bee Journal* has been suspended, but the editor promises to start it again as a monthly in March, at 60 cents a year.

☞ The British Bee-Keepers' Association demand that all honey in the comb shall be put up in American "Prize Sections," and shown in a Prize Crate, containing 12 sections and the crate glassed. We are glad to see this. It will pay to study uniformity in marketing honey.

☞ Bees in Sweetwater Valley, Cal., settled on a rattlesnake 6 feet long, 12 inches in girth, with 22 rattles, and stung it so that it was blinded, and afterwards easily killed with a spade.

☞ Mrs. L. Groves, Arvada, Col., has an apiary of 103 colonies. For a lady and Colorado, this is quite a large affair. But then, Colorado is one of the best of States for bees, and, with its salubrious climate, it is no wonder that a lady is robust and healthy enough to care for such a large apiary.

☞ The *Bee-Keepers' Instructor* and *Bee-Keepers' Exchange* have our thanks for kind mention of the Weekly BEE JOURNAL in its new dress for 1882. Both of these papers have materially improved for 1882, and we wish them success.

Suggestions About Conventions.

It is self-evident that there should be a reform in the methods of conducting Bee-Keepers' Conventions.

Last November, when giving the report of the Chicago District Convention, we stated that it was in many respects a model Convention. There were no essays read; it consisted wholly of discussion. The points of interest were all covered, by the excellent programme devised by the President, Dr. C. C. Miller.

In that Convention, the interest was kept up, unabated, to the end, and it was even difficult to get a motion to ajourn when the time arrived to do so. We have sent the following suggestions to the North-Eastern Convention, held this week in Utica, N. Y., on this subject, hoping that they may draw out a full discussion :

1. Some plan should be devised to make a more perfect organization, and *knit* together, more closely, all the apiarists of our country. County Societies should be auxiliary to the State Society (for such is yours, except in name), and all the members of the county organizations should thereby become members of the State Society, entitled to all its benefits and privileges, and proportionately bear the expenses of holding such. The Presidents of State Societies should become *ex-officio*, the Vice Presidents of the National Society, and thus cooperate unitedly for the general good —and delegates should be sent from the Counties to the State—and from the States to the National Society. This can easily be accomplished, and would contribute to the general welfare. Organization is *life;* in union there is strength. Disorganization is *weakness*, and leads to dissolution—*death!*

2. The present method of conducting conventions, by so many and such long essays, is killing in its influence, and often works positive damage to all concerned. To illustrate :

A long essay is read, and before it is ended, those who listen to it are tired out, and forget or do not quite comprehend the points, and so it passes, without being sufficiently understood or discussed—goes into the minutes, and under the sanction of the Society, is published to the world as its views, when, perhaps, it represents the opinions or feelings of but a moiety of those present, thereby doing positive *damage*, because it misrepresents the society in general. If essays are admitted, but one should be thrust upon a session, and if possible that one should be printed, and placed in the hands of the members to be discussed at the next session. In this way some of the difficulty could be overcome, and the detrimental effects avoided.

3. If such organization was obtained it would facilitate correct statistics, and the united power of the apiarists of the Nation could be exerted to demand legislation against fraud and adulteration ; obtain redress for injurious rulings of the Postal Department, such as denying the admission of bees to the mails, etc., and correct the unjust discrimination of railroads in classing honey at exorbitant rates when they carry *similar* staple articles at one-fourth the freight demanded for honey.

Again, a *brotherly* tie would be formed—helping one another—not only in the matter of marketing our crops, but perhaps in helping the unfortunate, succoring the families of deceased members, and possibly providing for those overtaken by calamities, etc.

These are but a *few* of the things that could be accomplished by united effort, but we only wish to throw out these suggestions, and leave it with others to discuss the matter, and devise a scheme for carrying it to a successful issue.

Honey-Making in the United States.

The following paragraph is part of an article which we have clipped from an exchange, and is credited to the *Popular Science Monthly:*

> The annual production of honey in this country is estimated at about 35,000,000 pounds, and the business of bee-keeping is becoming rapidly systematized. One firm of wholesale grocers in New York keeps as many as 12,000 swarms ; other keepers have often from 3,500 to 5,000 swarms. Arrangements are made with farmers and owners of orchards to allow an apiary of a certain number of swarms to be placed on their grounds. At the distance of three or four miles another apiary is placed with another farmer, and so on. For this accommodation, the bee-keepers pay either in money or in shares. It is estimated that, on an average, an acre will support twenty-five swarms, yielding fifty pounds of honey each. The apiaries are cared for by men in the employ of the bee-owners. Many ingenious contrivances have been introduced for the purpose of saving the labor of the bees and the keepers.

We were surprised to see a paragraph containing such gross errors emanating from so high an authority as the *Science Monthly*, and cannot pass it by without making some corrections, as it is not only calculated to mislead statisticians, but may eventually work serious injury to the bee-keeping interest. It illustrates, also, the ease with which standard publications can be mistaken in matters with which they are not perfectly familiar.

The production of honey in the country amounts to about 100,000,000 pounds annually, instead of 35,000,000 pounds, as given above.

The allusion to a firm of wholesale grocers probably has reference to the Messrs. Thurber, who may have handled the product of 12,000 colonies, but it was the combined production of scores of bee-keepers in all parts of America. But few, if any bee-keepers in the country, have more than 3,000 colonies. Capt. Hetherington, we think, is the most extensive bee-keeper in the United States, and 3,000 colonies is the maximum of his operations.

But when it is asserted that "on an average, an acre will support twenty-five swarms, yielding fifty pounds of honey each," the most incredulous disbeliever in over-stocking will smile with doubt, and, with pencil in hand, will figure it up as follows : Twenty-five colonies, each gathering fifty pounds of honey, would give a total average per acre of 1,250 pounds, and, assuming the bee's flight in each direction to be two miles from the apiary, would give 2,560 "average" acres within reach, capable of sustaining an apiary of 64,000 colonies, which, averaging 50 lbs. of honey each, would foot up a total yield of 3,200,000 pounds. Prodigious! Truly, "there's millions in it!"

Honey Wine.—Mr. C. J. Quinby, says the *Bee-Keepers' Magazine*, "has succeeded in producing a wine from pure honey *rivalling*, if not exceling, in all desirable qualities the imported wines. This wine has been submitted to experts, druggists, physicians and wholesale importers, and all, so far as we know have expressed themselves as surprised and gratified, and predict that this discovery is destined to work a complete revolution in the bee-business, greatly in favor of the honey producer, as it turns much of his produce into an entirely different substance, and hence necessitates a larger supply."

Glucose Syrups and Honey.

We have expressed the opinion several times, that it was an impossibility to manufacture complete honey combs by machinery, then fill them with glucose and cap them artificially; but when Dr. Nichols asserts so positively (as he is charged below with having done) that it can and is being accomplished, it is time to investigate the subject. With this object in view we have instigated a series of inquiries, and will give our readers the result when it shall be reached. Following is an article from the *New England Farmer* on this subject. The Dr. Nichols spoken of is, we suppose, Prof. Nichols, of the Boston *Journal of Chemistry*, in whom we recognize a stalwart and fearless opponent of food adulterations, and an advocate of honest goods under proper names:

> Dr. Nichols, in his lecture on sweets, delivered before the Massachuetts Board of Agriculture at Bridgewater, brought out some facts which are probably not generally known by the public at large. The syrups sold in our stores, he said, are doubtless all made up of mixtures, in which glucose or grape sugar, made from western corn plays a prominent part. As from ten to twenty-five per cent. of grape sugar can be mixed with cane sugar, and seventy-five per cent. of corn syrup can be added to sugar-house syrup without being detected by the taste, it is not to be wondered at that glucose is largely used in this age of adulteration.
>
> The product of the western cornfields now finds a ready market in New Orleans at the sugar and molasses factories, and it is believed that Cuba is becoming a good market for the product. If this is the case, why not take our glucose from first hand at a fair price, instead of paying transportation to New Orleans, Havana or Porto Rico and back, before we can bring our appetites up, or down, to the regulation standard of sweetness?
>
> But perhaps the most startling statement made by the doctor was, that glucose is really taking away the occupation of the honey-bee. It has long been used for feeding bees, and an inferior quality of honey is made from such feeding, but this is too slow and uncertain a practice for this ingenious race of Yankees. The glucose sometimes affects the health of the bees unfavorably, so a short cut is made by the manufacturing of a perfect comb from beeswax, and filling the cells with the glucose, direct from the syrup mills. The comb is made by machinery, and after filling is sealed over like bees' comb, and then sold in the markets of the world, perhaps as California honey or such other trade mark as the dealer may fancy. Verily this is an age of inventions.

It is undoubtedly true as the *Farmer* says, that much of our glucose finds a ready sale in New Orleans and Cuba, where it is mixed with sugars and syrups, and sent back to the North and West and sold as a pure cane product; and why this is done, is because the deception would not be complete without the expensive transportation, and Southern brand. The time is not far distant, if it has not already arrived, when glucose will be shipped to foreign ports in large quantities and returned to us as a genuine article of cane sugar, and this, too, after paying an import duty at foreign ports and another at our home ports, as was formerly said to be the case with American wines and liquors.

The BEE JOURNAL has long urged upon bee-keepers that the food adulteration question was one of vital importance to them, as not only working to their detriment in the home market, but liable to lead to a damaging prejudice in markets abroad. By reference to the proceedings of the Austro-German Convention, on pages 59 and 60, this week, it will be seen our fears were too well grounded. It was resolved to petition their government to increase the duties on honey and wax to such an extent as to virtually exclude them from their markets, and, moreover, the American proclivities for indiscriminate adulteration are also made the pretext for attributing the propagation of foul-brood to our exports. We have too much confidence in their intelligence to place any great amount of confidence in the latter bug-bear; but there may be room for complaint in regard to mixing glucose with the honey sent there, and if, instead of increasing the duty on honey and wax, they would make it a civil and penal offense to import or sell the adulterated article, we could rejoice with them in their progressive step.

A late number of the Chicago *West End Advocate*, says: "Recently three prominent citizens of Atlanta, Ga., died of paralysis, caused by the ingredients used to adulterate fancy brands of sugar and syrups." And it is insidiously working mischief all the time. If bee-keepers, or dairymen, or any other class of producers were alone the sufferers, there would not be so much cause for alarm; but when a whole nation, supposed to be composed of intelligent, thinking, charitable people, can supinely and inertly allow dishonesty and fraud, in the guise of food adulterations, to usurp the channels of honest trade, poisoning our whole people and imposing upon foreign confidence, it is time to examine the criminal code of foreign governments to find a remedy. We are almost persuaded that semi-barbarous China has taken a step in advance of the United States in civilization, in making death the penalty of food adulteration. Here, if one person kills another with firearms, or other violent means, it is "murder," but if whole communities are slowly poisoned with adulterated food, it is a matter of "business." There, if a whole people be slowly poisoned or diseased, it is as much a crime and punishable as if but a single victim suffers a speedy and comparatively happy death.

New Bee Feeders.—We have one from U. E. Dodge, Fredonia, N. Y., one of his bee-feeders, reference to which is made on page 61, this number. The feeder is made with two wooden strips 10 inches long, nailed on two others 6¼ inches long, making an open box about 10x7 inches; a 1½ inch strip is nailed crosswise inside 1¼ inches from one end, and a piece of cheap cotton cloth is nailed over the bottom from this strip to the furthest end, leaving the narrow open space for the bees to come up from below. The top of the box is covered with a 7x9 pane of glass. A slanting ¾ inch hole through one of the ends, to the inside, through which to pour liquid feed, completes the feeder. When more upward ventilation is wanted, this feed hole is covered with wire-cloth, instead of a tin slide.

From Scovell & Anderson, Columbus, Kan., we also have a new feeder. This is 9 inches long by 5½ wide and 2 inches deep. There are two outer 1-inch slots cut down into a block, something like the Novice feeder, in which to pour the feed, then two inner 1-inch slots, covered with wire-cloth, from which the bees take the feed, and between these a mortise is cut clear through, to allow the bees to come up. A ⅜-inch strip passes around the edges underneath, which bears up the feeder from the tops of the frames. This is for a top feeder, over the frames, and underneath the quilt.

☞Several correspondents ask for the best method of making paste for putting labels on tin pails of honey. Will some one please give a receipe for making such as will stick well to tin, and oblige many inquirers.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Small Packages for Honey.—The *Bee-Keepers' Instructor*, makes the following very sensible remarks on this subject:

"Extracted honey, 8@8½ cts. in round lots, to 12½ cts. in small packages." That is the way the St. Louis market report reads this month, and to the observant bee-keeper it speaks volumes. A difference of fully ½ in price for probably exactly the same quality of honey, and allowing simply to the manner of putting up. It is very plain that the day has gone by (if it ever existed), when honey in barrels, or large packages, will command anything like the price it will if put up in smaller, more attractive packages, and those apiarists who appreciate this fact, and cater to the popular demand, are not slow in reaping their reward. In this world appearances go a great way, and he who puts up his honey in the best manner—in small tin pails, glass fruit jars or kegs, if extracted, or small sections, packed in medium-sized crates, if comb—neatly labeled and scrupulously clean, is sure to realize top prices.

Poor Management of the Apiary.—Dr. J. P. H. Brown, Augusta, Ga., gives advice and reasonable hints to apiarists as follows in the Bee-Keepers' *Magazine:*

During the last of the month examine all your colonies as some might need feeding; if so, lose no time in attending to it. If the weather is cold at the time, the feed should be placed immediately over the cluster, or where the bees can get at it without crawling from the cluster.

For this sort of feeding the "pepper box" feeder, or the Van Deusen feeder is the one I prefer. Sticks of candy laid across the frames under the quilt is said to be good, but as my bees may be different from those of the parties who recommend it, they are prone to cut it up and carry it out of the hive as a nuisance. Ten pounds of granulated sugar to a gallon of water makes a feed that is always reliable.

Suffer no trash to collect on the bottom of your hives—sweep them out clean. Such debris usually contains the eggs of the bee moth or its larvæ, which will mature as soon as the weather gets a little warmer and commence to cut and web the combs of your weak stocks. In the latter part of the month there will be brood started in nearly all your normal colonies. This will particularly be the case if the month should be warm and open. When bees are raising brood they consume their stores rapidly; hence when you feed, either give it so fast as they will take it up until they get enough to last them till they can gather from the flowers, or feed in small quantities every other day until the middle of March. I have tried both plans of feeding and find the results about the same. The first plan is less laborious. There is to be no "half way station" in this "feed business." To feed for a while and then quit, and allow the bees to starve at last is indicative of unpardonable carelessness and bad management.

One of the great sources of failure in bee-keeping is in not having things ready at the right time. We wait till our actual need is upon us, then we send off for bees, queens, hives, sections, extractors, etc., and expect them right away. Some hardly wait till the order has reached its destination but write a "postal." "Why don't you send right along those things." Those people do not think that there are other bee-keepers besides themselves that have sent orders—many orders may be ahead of theirs. In getting off goods there may at times be some unavoidable delay over which the manufacturer may have no control. Sometimes delays occur by parties giving improper shipping directions, or may improperly direct their letter, or may fail to give their signature. I have often received orders from parties who wrote their names with so many flourishes and hieroglyphics that no experts within my reach could decipher them, and my only resource was, to cut the unknown signature off the letter, paste it on an envelope, and direct it to the post office address indicated by the post-mark, with the hope that the postmaster might be able to identify the writer.

It is not the intent of this article to be any apology for that class of supply dealers who are constitutionally slow coaches, and are dilatory in filling orders, but to urge bee-keepers to order before they need the goods.

It is the duty of every supply dealer to fill the orders he receives with the utmost dispatch, and we believe all those who have an eye to business do it; at least they endeavor to.

Organization.—The Indiana *Farmer* contains the following information to bee-keepers in Indiana:

At the last meeting of the State Bee-keepers' Society, the association was changed to a delegate organization and one vice-president was appointed for each county in the State. It was thought this would place the association on a more firm basis, and facilitate business. Each member of the county societies being also a member of the State Association and entitled to all benefits, copies of proceedings, etc. Some provision will be made for persons in counties where no organization exists, and the question will again come up as to the form of the association. In a communication to us last spring, Dr. N. P. Allen, then president of the National Association, says: "I notice in the address of your former president, Mr. Belman, that he recommends the organization of county societies in every part of the State. I was glad to see the recommendation, as I consider organization the life of bee culture, and the best thing that can be done to spread a knowledge of scientific bee culture among the people. If every state would organize a State association, and every county a county society, the honey resources of each state and county would be developed, and valuable satistics of the honey and wax productions of the United States obtained.

Bee Literature.—The *Eagle*, Union City, Indiana, gives its opinion of the necessity of bee literature, as follows:

A bee-keeper, without bee literature, is like a mechanic without studying architecture, or a farmer who will take any kind of stock on his farm, and not try to improve it.

What good will it do for you to have a colony of bees with a hive that will allow them to store away a hundred pounds of honey, if they can consume only 30 lbs., and leave 70 lbs. in their hive; the following year they can gather only 30 lbs., and the remainder of the year they will be idle for want of room? They fill up the brood combs with honey, and the consequence is they will not raise brood in the after part of the season, and they go into winter quarters with old bees, and if they live through the winter they will come out weak in the spring, when they should be strong, so as to commence storing for the coming season.

There are a great many good bee hives. One to be available must be a frame hive, easy to manipulate, so that, if your bees have more honey than they need, you can take it, without daubing your bees, and without making your honey mussy. Hence the most profitable thing that a man who has bees can do is to take a bee paper. The Weekly BEE JOURNAL is, I think, the best.

Driven off by Bees.—"The little busy bee" was once used in a naval fight in the Mediterranean. A gentleman recently wrote to the San Francisco Social Science Association, giving the story as he heard it from an eye witness. It seems that a small vessel, which was suspected of belonging to pirates, was chased by a Turkish man-of-war, on board of which were 500 seamen and soldiers. As soon as the man-of-war came up to the privateer, several hundred men were sent in small boats to take possession of her. When the small boats got alongside the privateer, the latter's crew mounted the rigging, taking with them a dozen hives of bees, which they had stolen to sell on the Italian coast. At the word of command the bees were thrown into the boats among the Turks. The terrible time that followed was beyond description. Some of the soldiers jumped overboard to escape the furious insects, and in the excitement the privateer escaped. The scene was witnessed from the deck of an approaching English ship, which picked up two of the Turkish boats.

CORRESPONDENCE.

For the American Bee Journal.

The Dzierzon Theory.

DR. G. L. TINKER.

That the questions arising out of this theory may be generally understood, I will preface this article with a few explanations. The Dzierzon theory, as now understood, is simply the doctrine of parthenogenesis or agamic reproduction applied to the honey bee. The Baron of Berlepsch's admirable treatise with the above title embraces thirteen propositions relating to the scientific knowledge of the honey bee. The eighth and ninth, setting forth the doctrine of parthenogenesis alone out of the thirteen remain unconfirmed. These comprise the salient points of the theory and are very ably discussed. Parthenogenesis is defined as "the production of young by a female without intercourse with a male." Agamogenesis, as "reproduction without the union of the whole or parts of two organisms for the formation of offspring." These terms are therefore nearly synonymous.

With many of the lower order of insects parthenogenesis is an established fact, since the virgin females in many instances produce female as well as male offspring. Going farther down the scale of life and we have simply dimorphism or alternate generation in which the female is parent only to the male, and the male only to the female. But such is the relation between the lower and the higher forms of life that the alternate generation may be traced as a preponderating influence in the generation of the higher forms of life; or in other words, the female, ordinarily, exerts a prepotent influence over the male offspring and the male the same over the female offspring.

Ascending in the scale of life, we find in hymenopterous insects a well defined exception to the complete operation of the laws of dimorphic and agamic reproduction. In the queen bee, no females can be produced without a union with the drone, parthenogenesis is so far true that the virgin queen can produce drones only. The only point in question, therefore, is whether the drone progeny of a fecundated queen may be affected by the mating drone. I think that it may be, and deny that the fact a virgin queen may produce drones is evidence that the vivifying fluid of the drone may not affect the ovaries of a queen so as to modify her drone offspring.

It has been said that a black queen mated with an Italian drone produces a drone progeny that cannot be distinguished from the drone progeny of purely mated black queens. So, too, it has been stated, that a pure Italian queen mating with a German drone may produce a royal and worker progeny that cannot be distinguished from that of a purely mated Italian queen. In the latter case, the fact of the impure mating cannot be positively determined except in the second generation. In the former case, the third generation would be required to determine perceptible effects, as follows: Mating a pure black queen with an Italian drone, one of her drones to be mated with a pure black queen, the royal offspring of the latter to be mated with an Italian drone. The drone progeny of the latter queen should show some of the markings of the Italian drone. A better test, to my mind, would be to begin with a pure Syrian queen to be mated with a pure German drone, etc. This would be a very difficult experiment to carry out, yet almost every other test must be attended with negative results. For instance, a Syrian queen may be mated with a German drone. The prepotency of the queen over her male offspring may obliterate all perceptible effects of the first cross, as with a black queen. Still the light colors of the Italian and Syrian bees are without doubt more easily affected by crossing than the dark color of the German bees, since the workers of a black queen fecundated with an Italian drone are only about one-third marked with one or more yellow bands, while in an Italian queen mated with a black drone at least one-half and often two-thirds of the workers will be without yellow bands.

I should not regard the mating of a Syrian or Cyprian queen with an Italian drone as affording a reliable test, owing to the three races being evidently nearly related.

A test having some reliability is where a lot of pure sister Italian queens have been mated, some with German, and some with Italian drones, as indicated by their worker progeny. The drones of the impurely mated queens will show an admixture of black blood in their form, size, growth of hair at the end of abdomen, and color, while the drones of the purely mated queens will be quite similar in all respects and well marked Italians.

Having repeatedly observed these results with great care, led me at at length to doubt that part of the Dzierzon theory relating to parthenogenesis, except in so far as it applied to virgin queens and laying workers.

There are, however, other considerations bearing against the theory worthy of notice. As will be seen from the anatomy of the generative organs of the queen bee, there are a large number of ovarian tubes (according to Prof. A. J. Cook not less than one hundred) opening into the oviduct. In the act of copulation there is nothing to prevent the spermatozoa of the drone from migrating, as is their wont, through all of these tubes. That their presence in a queen's ovaries could have no effect upon them, seems to me quite improbable. Indeed, we find the abdomen of the queen to begin to enlarge at once preparatory to the depositing of eggs, demonstrating that their (the spermatozoa) presence has had a decided effect.

Again, it may be found that the ingress of only one spermatozoon into the micropyle of an ovum may not be sufficient to alter the sex, which has been shown to be constantly male in the eggs of the virgin queen, but the entrance of several spermatozoa into an ovum, in passing by the spermatheca, may cause the male elements to be prepotent and so change the sex of the ovum. In this manner it is possible to account for the variously marked worker bees of an impurely mated queen by supposing some ovi to be impregnated with a few, and others with many spermatozoa.

In concluding, it may be well to note, that since agamic reproduction in the honey bee has been left an open question by so excellent an authority as Prof. A. J. Cook in his "Manual of the Apiary" (see page 89), no more fruitful field for experimentation is now open to the scientific bee-keeper or the practical scientist.

New Philadelphia, O.

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For the American Bee Journal.

Another Bee Enemy.

E. T. FLANAGAN.

I find the following in the *Bee-Keepers' Magazine* for December, 1881: "Mondovi, Wis., Oct. 12, 1881—Mr. Editor: There has been a worm in these parts, that has destroyed a good share of the brood; it seems to be different to the moth worm, and works wholly in the bottom of the cell, and kills the brood before it is ready to hatch. It does not look to be affected until the bees uncap it, and it is all dead. I cannot find any way to get rid of them, they eat from one cell to another, and through the center of the comb. The worm is not like the miller moth worm, but is much smaller and seems to hatch in the bottom of the cells. I have found some of the worms not larger than a worker egg, all the way up to as large as a small sized knitting needle, and about ½ inch long. I find them in every one's bees that I have looked at; if they continue, they will ruin all the bees. Have you been troubled with any such thing, and if so, is there any remedy? —N. H. Fisher."

To which Professor Hasbrouck responded: "The worm you describe seems to be something new, I have never before heard of anything like this."

In an article in *Harpers' Magazine* for Dec., by W. H. Gibson, entitled "Among our foot prints." I find the following which may throw some light on the subject:

"There is still another beetle which is met with in our rambles *** known as the meloe. In color the meloe is of a deep indigo blue, rotund in form—when touched it exudes from every joint a yellowish liquid, from which habit it is commonly known as the "oil beetle," or oil bug, and by which it may be easily recognized * * clumsy and unattractive as this beetle is, it is nevertheless much more interesting than one would immagine * * * Briefly told, the history of this common blue beetle is as follows: It feeds upon the leaves of butter cups and other plants, on the ground beneath which the female deposits her eggs, several hundred in number. These hatch into very minute, but surprisingly active larvæ, scarcely larger than a hyphen on this page. They immediately crawl up the stems of neighboring plants, and nestle among the blossoms. I have seen large numbers of them in a single flower. Beneath the magnifying-glass this tiny creature is seen to possess six long legs. They are given to the grub only at this stage of its existence and for a special and remarkable purpose. It is not in quest of honey that this little atom seeks the blossom, but merely as its lair, in which to lie in wait for its victim. Presently it comes in the shape of a bee that alights on the flower. In an instant the agile meloe jumps upon the body of the intruder, to which it clutches tightly, with those six clasping legs. Thus clinging it is carried into the hive, and when the bee reaches its cell, the meloe releases its hold, and creeps into its new home, where it finds the plump, white bee grub a ready breakfast. By the time the young bee is devoured or several of them, the meloe casts its skin and assumes the form common to the larva of many beetles, in which those long legs are no longer seen. Henceforth, it feeds on the pollen or bee-bread stored by its duped foster-mother, until when fully grown it passes into the pupa state and soon appears again as that guileless innocent in our footpath."

Is not the connection between the two accounts quite marked, and is not this worth looking into, during the coming season, by our sharp, quick, wide-awake apiarists? especially in that section of our country where the loss of bees in the manner described by Mr. Fisher occurs?

Belleville, Ill.

For the American Bee Journal.

Moving Bees in Winter.

O. P. CODDING.

I bought in Jan. 1868, two colonies in box hives; they were to remain in the cellar where they were until spring, but sometime in March I got uneasy about my bees and brought them home, put them in the cellar and they remained there until the last of April, when I put them out. They were all right, gave two swarms each, and gathered some box honey.

Again, in Nov., 1880, I went to St. Albans, a distance of about 28 miles, and purchased 10 colonies of hybrids, but the roads were so rough that I did not dare to move them. About the middle of Dec., when it was good sleighing I brought them home safely, starting about day-light, and arriving home about dark. I stopped about one hour at noon, to feed my team and for dinner. I opened the entrance of all the hives, to give the bees fresh air; they were all as quiet as they would have been in the cellar. I then closed the entrances and drove home, and put them into the cellar next morning. They remained in the cellar until April 20, 1881, when I put them out, and found live bees in every hive, although one was queenless, and had but few bees, but this was not caused by moving, I do not know but they wintered just as well as 10 others, put in about the middle of Nov. None of the 10 purchased had any dysentery. The best colony cast 4 natural swarms; the first gathered 92 lbs. of honey which I extracted, and cast a swarm, making 5 swarms and 92 lbs. of honey. All are alive at present.

I would not have you think that I advocated moving bees in winter when you cannot give them a flight afterwards, but it worked all right in my case, and I should try it again if I wanted to move bees under similar circumstances. I also know of two other trials at moving bees in winter; both came out well excepting one tip-over which smashed up some of the combs.

The colonies I moved last winter were in Langstroth hives, which, by the way, I do not like very well.

Johnson, Vt., Jan. 14, 1882.

For the American Bee Journal.

Section Honey Boxes.

E. A. THOMAS.

This is an old subject, and one that has been thoroughly discussed in the JOURNAL, but for the benefit of the hundreds of new subscribers I will express my views in regard to the various sections now on the market.

I will first divide sections into two classes, those holding about one pound, and those holding two pounds. In regard to the relative value of these two classes, much depends upon the state of the market. The sooner bee-keepers realize this necessity of producing honey in good packages as the market demands, the better it will be for them.

At the present time the tendency of the market is towards pound packages, not only for honey, but for all light groceries. A careful examination of the honey markets for the past year should convince every one that honey in one pound boxes brings a higher price and quicker sales, than any other package. It has been my experience that bees will not store as much honey in one pound boxes as in two pound, as it takes them just as long to finish up a pound box as it does a larger, and in the honey season, time is honey with bees. But the deficiency in the amount of honey stored in these boxes is more than balanced by the difference in the price of such packages and those holding two pounds or more; so we have the advantage of quicker sales in favor of the one pound sections.

Of the two pound boxes, I prefer the "prize box," which makes a very attractive package for the market.

In regard to the dovetailed *vs.* one piece section controversy, I will say that I have not fallen in love with the one-piece section; it may be the best, but I *fail to see it*. Perhaps it is owing to my obtuseness that I am unable to appreciate its value. I have found the box faulty in the following respects:

1. They cannot be bent into shape, without cracking the corners, as rapidly as the dovetailed boxes can be driven together. That they can be bent into shape all right, I do not question; but it takes time and care to do it. Skillful workman may after long practice bend them very rapidly; but it must be remembered that the bee-keeper who only uses a thousand or two does not get the requisite practice to enable him to do it rapidly and without cracking the corners.

2. They do not make as strong a box as the dovetailed. Do not pass over this point as one of minor importance, for it is of great importance to the bee-keeper, the grocer and the consumer. I do not doubt but that if handled with care they will cause no trouble, and the bee-keeper, who understands how they should be handled and packed for market may have no troubled with them. But when the honey falls into the hands of the grocer, what then? A customer comes in and calls for some honey; he takes out a section from the crate and puts it into his scales, not as gently as he might, weighs it, and sets it in a decisive way on the counter in front of his customer, perhaps hitting one corner on the counter first and thus racking the box. The customer pays for the honey and goes to pick it up, and says: "Here, this honey is leaking all over me." The grocer looks, and sure enough, it is; he has cracked the comb in racking the box. He has to give him another box, and either consume the broken honey himself, or sell it at a discount. The lesson teaches him to be more careful for a time, but by-and-by he gets in a hurry and cracks another.

The result is that when the producer or commission man comes around again, a conversation something like the following will take place:

"Good morning, Mr. Blank; is that honey all sold?"

"Yes, sir."

"Well, how did you like it?"

"I don't like it; the boxes are so weak that every now and then I crack a comb, which spoils the sale of the box, and honey daubs my counter, floor and myself."

"Is that so?"

"Yes."

"Well, now *we* never have any trouble with it, suppose you try another crate?"

"Don't want it. If you have got any honey in boxes strong enough to hold it, I will take some; but I don't want to handle any more like the last at any price."

Those who favor using the one-piece section may say that if the grocer would use proper care, there would be no trouble. Now, friends, please remember that "if" is the biggest word of its size in the whole English vocabulary, and that grocers *do not* always use proper care. They are not, as a general rule, bee-keepers, and do not know all about the one-piece section and how to handle it; consequently, they handle them as they would any other box, and the result is that they now and then crack out a comb or set the honey to leaking, become disgusted, and refuse to handle honey. Every one should appreciate the fact that, in order to create a steady and uniform market, it is necessary to put honey on the market in such packages as will cause the grocerymen the least trouble in retailing. We should make it for their interest to handle it, when they will take pains to increase the demand.

But suppose the honey gets into the hands of the consumer in good shape, what then? Perhaps he steps into several stores on his way home, and in setting his box down he is very liable to hit one corner first; before he gets home, he may find his honey leaking all over him. Put yourself in his place and see how you would like it. Do you think you would want to buy any more in such a box? I am sure I should not.

In regard to the appearance of the all-in-one-piece sections, I must say that if accurately made they are very handsome. If the corners are glued, the second objection is done away with, but as this will require a great deal of time and care, it will only serve to strengthen the first objection.

Coleraine, Mass.

For the American Bee Journal.

Extracted Honey—No. 2.

JAMES HEDDON.

The question is frequently asked, "which class of honey production pays best—comb or extracted?" In reply, one writer argues in favor of comb, and another in favor of extracted honey. Each produces some arguments that are valid, and make us wish we were devoted exclusively to his choice.

Answering that question, from a stand-point of the present, I would say that the difference in the nature of the production, and present market value of each class, is so slight, that greater reasons for a choice lie in the adaptability of your climate, flora, market, and your natural choice in the different styles of labor connected with them.

Owing to the successful employment of our best comb foundation, I think that I prefer comb honey production; however, if I start another apiary, which I shall do ere many seasons, instead of dealing in supplies (if my trouble of poisoning from the bees improves as it is now doing), I shall devote it exclusively to extracted honey. I will tell you the reason why, and this will touch the third part of the subject—marketing.

From the length of time that I have been engaged in the business, and the amount of shipping and jobbing of honey I have done, I am continually receiving orders from abroad, and some of these are for extracted honey. To hold this trade, it is really necessary to keep an assortment of styles on hand. But I am not going to mix the two classes of production together in one apiary. I see little good, and a great deal of damage, in such a course. The extractor (a thing no man should be without), used in the comb honey apiary, will be used only in cases of emergency, as a mechanical necessity, and to empty the partly filled sections in the fall.

If all my honey crop was to be sold at wholesale, I should choose which class I would produce, and become a specialist in that class, were I running a dozen apiaries.

Comparing the profits of the two classes of production, in the near future, I have no reasons for any choice, in the probable prices. Both will be levelled to the cost of production with our necessary margin added, if such is not already the case. For the production of extracted honey, as for both kinds, I should start in an unoccupied field, or not at all. I should try to form some sort of an estimate of the amount of nectar annually secreted on an average, within my area of say six miles diameter. Next, of about how many colonies working in this field would give me the most surplus honey.

Both of the above problems are very knotty, and there is no doubt but that less has been learned, for the amount that has been said about them, than about any and all others, the wintering problem thrown in. All I can say is, notice that nearly all the large percentages of increase and surplus that are reported are from small numbers of colonies. We often see "from 10 to 70 colonies and 1,200 lbs. of surplus and how I did it," but we never see from 100 to 700 colonies and 12,000 lbs. of surplus, unless it ends with, "how I didn't do it."

The one who looks over the field must form the conclusion as to the best number of colonies to keep, for the best results, and then "cut and try" till he is satisfied.

Lay out a yard large enough to hold the maximum number of colonies you expect ever to keep in that locality, and put a tight board fence around it, 6 or 8 feet high, and if in an exposed position to thieves or meddlesome boys, run 2 strands of sharp barbed wire all around over the fence, about 8 inches above the fence, and the upper one 10 inches above the lower one. Make at least four gates, and one capacious building on the south side of the apiary. This will give you a cool front, and you can see the bees fly, when swarming or otherwise, plainer against the northern sky. Have a well close to this building, and keep two extra pails and a Whitman fountain pump always in readiness, for any straggling swarms that come along, or any of yours that might attempt to abscond. The pump is *par excellence* to keep two swarms from mixing, that might come out together. With this pump, we one year caught two swarms that came along, that no other device could have arrested, besides stopping 4 of our own that attempted to leave us—all that tried to go that season.

Have the floor of your building of dressed lumber, if you can afford it, matched, and of hard wood, at least under, around and about your extractor. Have that extractor fastened solid to the floor, and to the wall at one side. I much prefer the overhand motion of turning gear, and like the Excelsior the best of any machine I have ever seen on the market. Have a broad shelf, about 3 feet high handy to the extractor, and a drip pan for cappings. We have used one on the same principle, though smaller, as the one described by Chas. Dadant & Son, in back number of the BEE JOURNAL, with wire-cloth middle, and pan below to catch drips.

Many other details might be mentioned, but I will pass on to the hive for extracted honey. I know the hive question is one about which there is much prejudice, so I will "touch lightly" and simply give you my preferences. I would use the same hive (and have used it for taking honey in the extracted form) that I do for comb honey, viz: the 8-frame Langstroth. I have tried the 10-frame extensively for extracted, as well as comb honey, as I have also the one-story hive, and while I am aware that there are some strong points in favor of the one-story, yet there is, I think, more in favor of the 8-frame Langstroth hive. With the upper story for combs of the same size out of which to take all of the honey that we extract. It will be found unnecessary to go down into the brood-chamber, or hive proper, for surplus, if the arrangement is right. I have discarded metal rabbets for the hive, but for the super out of which we extract, I always use them, in conjunction with flat, wood top-bars, but never metal corners.

I think no sounder advice can ever be given than to say, use only the standard Langstroth frame, have all combs built on full sheets of worker foundation on wires. If you have all worker combs below you surely must above, or the queen will present you a lot of up-stairs drone brood. I always use a thoroughly perforated honey board (of a peculiar construction, which cannot well be described here), that is adapted to a super that is suited to the hive, without any honey board, as well as with. At first I sometimes, on some colonies, adjust the super without the board, but adjust the board the first time round to extract. The presence of this board also facilitates the handling of the frames wonderfully, and at the same time has a tendency to dissuade the queen from going aloft. In the hive I use 8 combs, within the space of 11½ inches. In the supers of the same space (after the foundation is drawn out into comb) I use seven.

We now have the super ready, and supposing that some of the colonies and the field are ready for surplus storing, we lift the hive cover and adjust the second story or super; place the same cover on the super, and turn your pins in the surplus honey register, one to the date, and the other to "empty," and then wait patiently till time to examine it.

Dowagiac, Mich., Jan. 9, 1882.

For the American Bee Journal.

The Foul Brood Disease—A Review.

A. R. KOHNKE.

For the last three years or so, I have been watching with great interest the discussions as published in the BEE JOURNAL, with reference to foul brood. Most or all of our knowledge how to cure this disease has come from Germany, based on unrefutable testimony, experiment and experience of bee-keepers in that country who took a special interest in this subject, not only as apiarists but as scientists, until after a protracted trial of several years, salicylic acid was pronounced the specific. Through the instrumentality of Mr. Muth, of Cincinnati, this knowledge has partly been disseminated in a general way, but his success in eradicating the disease in his apiary has thus far not supported his faith in the reliability of the remedy. For in reviewing the BEE JOURNAL of the last three years, we find him having one or more cases of foul brood on hand every year. This he attributes to contagion from outside sources. How far Mr. Muth may be correct in his supposition I have no means of knowing, but it is evidently based on the reappearance of the disease, after he had, as he thought, cured the diseased colonies.

I proceed rather reluctantly upon what I have further to say on this subject, because in the first place I am comparatively little known, certainly not as extensively as Mr. Muth is; second, the latter gentleman is a personal friend of mine, with whom I very much dislike to disagree, when I know that this may possibly rob me of his friendship. For this reason I have abstained from criticising his articles, hoping he would in time correct himself, for the benefit of all concerned.

But now to the prescriptions Mr. Muth gives: I quote from BEE JOURNAL of 1879, vol. 15, page 503, where he states that E. Hilbert used 50 grammes of salicylic acid and 400 grammes of pure spirits, which reduced by 50 gives 1 gr. of the acid to 8 of spirits, this he discarded, because he found it killed the larvæ and he had made up a different solution by his druggist, viz: 128 grains of acid, 128 grs of soda borax and 16 ounces of water, or reduced by 16—8 grs. acid, 8 grs. borax and 1 ounce of water. But in BEE JOURNAL of 1880, vol. 16, page 535, it is stated 16 grs. acid, 16 grs. borax and 1 oz. water.

Now it is evident that Mr. Muth has made some grave mistakes and the reappearance of the disease in his apiary may be caused as much from that as by contagion from outside sources, as I shall presently show.

1. The first solution of the acid in alcohol is too strong and his larvæ did not die from the effects of the alcohol but from an overdose of the acid; he states "1 drop of that solution into 1 gramme of water," as used by E. Hilbert, and in the next column "a small portion," What signifies a drop? Of alcohol it takes 138 drops to fill a fluid drachm, but only 45 drops of water to do it. How much is "a small portion?" Is a physician warranted to use that expression in his prescriptions? Will it do for him to say take of arsenic or laudanum a small portion? The difference in size of a dose of calomel makes all the difference in the world as to the effects of it. Nobody need suppose that salicylic acid is as harmless to bees as some are inclined to believe. If used too strong in the feed for the bees, they will not take it, if weak enough so that they do not object to it, it may still be strong enough to kill the brood, as Mr. Muth found out, though drawing wrong conclusions. But let us proceed to his mistake number two.

2. In vol. 15 of BEE JOURNAL, the proportions are as 1 oz. water to 8 grs. of acid. In vol. 16 of the same paper they are as 1 oz. of water to 16 grs. of acid or double that of the first; in the first it is in the proportion of about 1 gr. of the acid to 57 grs. of water in the second 2 grs. of the acid to the same amount of water. As Mr. Muth refers to those in his other articles and essays on foul brood, which is the right one? I answer: Neither! This leads me to mistake number three.

3. Borax is borate of soda or two equivalents of boracic acid combined with one of soda. Now it is known that in liquid solution boracic like carbonic acid is a very weak acid and easily driven from its base, the soda, by others even such as acetic acid. To illustrate the process I subjoin the following diagram:

Borax } Boracic acid $^2BO_3$ is liberated and free in solution.
Borax } Soda . N_aO }
Salicylic acid...... } combines and forms salicylate of soda.

But salicylate of soda is entirely useless as a disinfectant, in fact any soda salt interferes with the disinfecting properties of salicylic acid.

If Mr. Muth had told the druggist for what purpose he wanted the solution, he would, perhaps, have been told the merits of that composition; but if he did, I am rather inclined to believe that it is an oversight of the druggist, forgetting that some remedies or medicines are incompatible.

If anyone should doubt my statements, I refer them to the article on salicylic acid, in the United States Dispensatory, 14th edition, 1877, page 1749 and 1750, where it plainly states that soda salts must be avoided to aid in dissolving salicylic acid if used as a disinfectant.

But what about the cure he effected? some will ask. I reply, a cure has never been effected, but Mr. Muth treated his diseased colonies to pure comb or foundatian, and pure honey, by which a suppression of the disease was effected only for a shorter or longer period, after which a renewed outbreak made its appearance, as abundantly proven by Mr. Muth's admissions.

This explains also, why some claim not to have been successful with salicylic acid, as they probably used the method Mr. Muth recommended.

Besides the points taken above, there are others of as much importance, for instance the temperature of the solution to be used in sprinkling the bees and brood; "lukewarm" is a vague expression, but 70 or 80° Fahr. everybody can find out what that means. This article is longer than I intended it to be and I will close it for the present.

Youngstown, O.

For the American Bee Journal.

The One-Piece Sections.

JAMES FORNCROOK.

MR. EDITOR.—In *Gleanings* for January the following editorial paragraph appeared. It reflects upon me, and classes me with N. C. Mitchell, and I would ask space in the BEE JOURNAL to reply thereto, and to set myself right. Mr. Root says:

FORNCROOK'S PATENT ONE-PIECE SECTIONS.—Out of respect to friend Forncrook we have permitted the advertisment to go in as you see it, although it does seem as if he were getting very close to our friend Mitchell, in claiming all section boxes made of one piece of wood. I have pointed him to a letter in *Gleanings*, describing one-piece sections, made and used several years ago; but his reply was to the effect, that sections made of strawberry-box stuff are quite another thing. This amounts to saying, as I see it, that a *rough* box is not patented; but if you plane it, or sandpaper it, you are infringing. Do you say that a patent has been granted him? Very likely; but so has a patent been granted on the foundation we are using; on putting it on to wires; on division-boards for bee-hives, and also on the very tin separators we are using, and have been using for years. The Patent-Office supposed all these things were new, and are doubtless honest; but, friends, is it in anyway likely they have a man in the whole Patent-Office corps who has an idea of modern bee-culture? A proposal was started, at the convention, to raise a fund for mutual protection, if any of our number should be subjected to expense; but I trust nothing of this kind may be ever necessary. Mr. Forncrook proposes to make all bee-keepers pay $6.00 per thousand, instead of the established price of $4.50.

The letter Mr. Root refers to is in *Gleanings* for April, 1876, and is as follows:

SECTION FRAMES AND HONEY BOXES—*Friend Root:* I see by *Gleanings* for March, that J. I. Johnson, Palmyra, N. Y., asks a preventive of bees running the combs together in section boxes. I will tell you what I did last summer, and it worked to a charm. I had 8 colonies of bees in double hives, my own make, Quinby suspended frame, 20 frames in hive. I made 100 lbs. box, 150 in sections, and 50 extracted honey. I live on a public road, and people constantly passing wanted a few pounds of honey; of course they had nothing to hold it. Well, I thought about a section box; I could get nothing to make them of easily, so I got some *peach box covers* and some *strawberry box stuff*, and ripped them up in one-inch strips (I suppose you know how a strawberry box is, cut half through at each corner and nailed at one side, but the *veneer* must be wet over night before *bending*; it then works nicely). I then put a piece of comb in the top, 1 inch square (would prefer drone comb if white) in some I struck little bits of wax along the under side of top. When filled they weighed from one to two pounds each. Only two sections out of the 150 lbs. were connected. I sold all my honey at the house, for cash, comb honey 25c., extracted 20c. I had more demand for the little sections than any other. I put the sections in the frames both front and back of the hive. I think the comb foundation for the sections, a grand hit. One colony made 90 lbs. comb honey. Besides the 300 lbs. honey, I had 6 swarms from the 8 colonies, making 24 all in good order, to start with this spring. ALEX. FIDDES.

Centralia, Ill., Mar. 8, 1876.

Mr. Root sent us the above extract, and stated that the one-piece section was mentioned in the first edition of Cook's Manual, but when pressed, he could not find it. At the Convention at Battle Creek, Mich., last December, Prof. Cook admitted that the berry box section was not of practical use for shipping honey in.

Three years ago Lewis & Parks sent a sample of our one-piece section to Mr. Root, and in *Gleanings* for February, 1879, he remarked as follows, concerning it:

"Their new section box will not come under this criticism for although it is more work to make than ours, it is a most decidedly neat and finished job when done. They apply the same idea to making boxes, and if any want these in place of sections, they are most decidedly the handsomest honey box for the money which I ever saw. As the principle is evidently no secret, I will give it here. I made a few sections on nearly the same plan, as much as 3 years ago but discarded the plan as being too much work."

In the above extract Mr. Root admits that it is new, when he calls it their "new section box," and says "I made a few sections on nearly the same plan, as much as 3 years ago, but discarded the plan as being too much work." He discarded it, probably, because he had not the ingenuity to perfect it, and now it has been perfected, he would like to claim it as his idea, when, it is safe to say, he never thought it *could* be perfected.

His discarding or abandoning the section shows that he did not consider it practical. All the Patent Office wants to know about any invention is: "has it been in public use two years prior to the date of the application?" Because a man or a half-dozen men put some strawberry boxes on their hive, and had them filled with honey, does not prove that sections made of "one-piece" were in public use. Mr. Root's assertion that because we have planed our section, we have patented it, is too silly to reply to.

He says we propose to make bee-keepers pay $6 per thousand instead of the established price of $4.50. Who established this price? Mr. Root did not. He never reduced the price until he was compelled to by others coming down. We reduced the price of sections and there was a good living profit then; but, as everybody knows, basswood has since advanced at least one-third.

In *Gleanings* of December, 1877, Mr. Root advertises thus: "Section boxes in the flat by the quantity $9.50 per thousand and upwards, according to size." Why did he not then have interest enough in bee-keepers, to reduce the price to $4.50? They could be made as cheap then as now.

The true reason of Mr. Root's opposition is this: He has been manufacturing one-piece sections, and selling machines to make them, which our patent now prohibits him from doing.

Mr. Root is the wrong man to class anyone else with N. C. Mitchell. He said he inserted our advertisement "out of respect to Mr. Forncrook." Why should he *respect* a man whom he publishes as a swindler and classes with Mitchell?

Watertown, Wis., Jan. 16, 1882.

[We give place to the above communication, simply to let Mr. Forncrook define his position, and that he may be understood aright, having been publicly classed with Mitchell, etc.

When the Commissioner of Patents ordered the taking of testimony in the case of interference, the editor of the BEE JOURNAL was summoned as a witness against Mr. Forncrook, and in testimony gave a history of the use of section boxes for honey, and produced the first efforts of quite a number of inventions—the berry box, the section of Mr. T. T. Delzell and some others—and the Commissioner of Patents decided that none of them were competent to debar the issuance of the patent—and accordingly ruled them out. These points were then thoroughly tested, and we can see no use now of bringing up a point already decided, especially as, so far as we can see, the patentees do not intend to use their patent to defraud bee-keepers, or make them unnecessary trouble.—ED.]

The Cultivator.

Report from my Apiary.

W. Z. HUTCHINSON.

Perhaps some of your bee-keeping readers would be interested in a report from my own humble apiary. I was not one of the fortunate ones, as, during last winter, I lost nearly all my bees. It was with difficulty that I obtained money with which to buy more bees; while to find bees to buy, unless at exorbitant prices, was an equally difficult task. All the colonies purchased were either in box hives or else in movable comb hives having frames that differed in size from mine; hence all had to be transferred. June 1st, I found myself the possessor of 18 fair colonies. The weather continued so cold, that queen-rearing operations were not commenced until nearly a month later than usual. White clover began opening its blossoms about the first of June, and although it was so abundant that many fields reminded one of a snow-drift, yet the weather remained so cool that but little surplus was gathered until the latter part of the month. The yield was quite fair from about June 27th until about July 8th, when the white clover was deserted for the fragrant, bounteous basswood. The yield from basswood was fair, but that from fall flowers was cut short by the drouth. I reared and sold 263 queens, doubled the number of my colonies, and obtained 1,100 pounds of extracted honey. I keep an exact account with my apiary, and estimating the colonies that I now have on hand (28) at $5 each, my profits have been $15.43 per colony.

To help solve the wintering problem, I am trying several experiments. Some of my colonies have been deprived of their natural stores, and have been fed A coffee sugar. Others have been given early-gathered honey, while others have been left wholly undisturbed. Eleven colonies were protected, by different methods, and left upon their summer stands, ten were buried in clamps, and seven were placed in the cellar. Next spring I will tell your readers how my bees wintered, and which method gave the best results. I am glad to add, in conclusion, that, although the production of honey is steadily increasing, it is no longer a drug in the market. It never could be so readily disposed of as at the present time. Large quantities have already been sent to Europe, while the indications are that the foreign demand will largely increase, and that honey will eventually become nearly as staple a product as the biscuit and butter with which it is eaten.

Genesee County, Mich.

Prairie Farmer.

Preparing Bees for Winter.

MRS. L. HARRISON.

There are some things, with reference to wintering bees, upon which bee-keepers differ; but all agree upon these two points, that in order to be successful, young bees should be raised late in the fall, and plenty of well ripened sealed honey, accessible to them at all times. In this locality last year, the flow of honey lasted until the middle of October, and was so abundant that the brood chamber was filled with it, to the exclusion of brood. Consequently the bees forming the colonies at the commencement of cold weather, were old and feeble, and had worn themselves out, gathering the heavy fall harvest.

By reason of the long continued drouth, we find that honey is not encroaching upon the brood chamber at the present time, but it is filled with young of all sizes. Therefore, there will be plenty of young, vigorous bees, with meager stores. Late swarms, either natural or artificial, should be examined, in order to see if they are gathering sufficient to keep up breeding, and if they are not, they should be fed. The value of bees have very much increased, by reason of the heavy losses of last winter, and even should the coming season prove to be a mild, and successful one, they will be in demand, as the past summer was not favorable for their increase. We have often noticed that the small colonies, that we were petting all the fall, were our very best the following summer.

In order to rear brood, food should be given sparingly, so as not to have it stored in the brood apartment, but when feeding stores for winter, it should be given abundantly, as fast as bees will store and seal it. A person must be governed by his locality, as to the time when winter stores are given—some feed as soon as frost kills the flowers, and recommend throwing out all unsealed honey, and feeding a syrup of granulated sugar.

We have been strengthening our weaker colonies, by taking two or three frames of brood from the strongest, and giving it to them. In place of the removed brood, good worker comb was placed, and the colony fed at night with extracted honey. When we first attempted to remove these brood frames, we were compelled to beat a retreat, but after feeding for a night or two, they were on their good behavior, and as civil and polite as a dancing master.

Before opening a hive, when honey is scarce, it is well to take the precaution of feeding a little for a few nights, and opening it early in the morning or late in the evening, when few robbers are on the wing. As we had not feeders enough to go round, we followed the advice lately given by a bee-keeper, of using small tin pans covered with thin muslin, and tied under the rim, so bees cannot get under it. These feeders are a success, when the muslin is tied loosely, it will settle down as the bees remove the feed, and no bees get drowned.

Peoria, Ill.

* * *

For the American Bee Journal.

Prof. Cook on Pollen and Fæces.

WM. F. CLARKE.

If I tackled Mr. Heddon with diffidence, it is with fear and trembling that I presume to break a lance with Prof. Cook. But, high authority as he is, justly, among bee-keepers, he is not infallable, and I am sure does not wish to be so regarded and treated.

I have read with considerable astonishment the Professor's article copied from the *Rural New Yorker* into the BEE JOURNAL of Jan. 11th, and headed, "Pollen in the hive in winter," and beg, with all due modesty, to set forth the points of my astonishment. At the outset, the Professor specifies a few statements made by him in the bee periodicals, and in his "Manual of the Apiary." They are as follows:

1. "That the old bee could live for long periods without pollen."

2. "It is to be presumed that the old bees need, and do eat some pollen during the active season."

3. "That pollen is an indispensable requisite to brood-rearing; that it is an essential element in the food of larval bees."

As a "scholium" under this last proposition, the Professor tells us he has "expressed the opinion that in some conditions, the presence of pollen in the hive in winter is a positive injury, and that, in all cases, it is unnecessary." An emphatic remark is then added, "that this pollen is more valuable as soon as the bees commence to fly the following spring, and then any frames that contain it should be given to the bees."

My astonishment began to burst forth when I read the next sentence, which I take the liberty of italicising: "*These facts have lately been called in question by several writers.*"

Now, I am not aware that any of the above stated positions have been lately called in question, except the one styled by the Professor "a scholium." By the way, it is hardly "a scholium," which means, according to the dictionary, "annotation, an explanatory note." I think it is an independent proposition. As I am one of the "several writers" referred to, let me say, I call in question only the "scholium." Nay, I have hardly called that in question. I have represented it as "not proven." I have certainly called in question Mr. Heddon's position that pollen is the cause of dysentery, but that is a far more sweeping statement than the one made by Prof. Cook.

My astonishment was considerably increased when I read a little further on the following allusion to *somebody*. "One writer, however, who, whatever else may be said of him, puts forth very original ideas, and contradicts nearly every well-grounded fact in apiculture, calls for proofs." I said to myself, as I read that over and over again, "can he mean me?" "Puts forth very original ideas." Well, that's highly complimentary, but I can't claim any originality; I'm but a humble disciple of Langstroth, Quinby, Cook, and other great authorities in apiculture. "Contradicts nearly every well-grounded fact in apiculture." That isn't me; "sartin, sure." If I contradict *any* "well-grounded fact in apiculture," I don't know it. Neither do I know any writer in the bee periodicals of whom his sweeping assertion is true. Who is it? "Calls for proofs." Well, that's me. I am in the habit of doing that on every subject, even the subject of religion. And, surely, Prof. Cook will not make it a ground of complaint against any man, that he "calls for proofs."

I have called for proofs that pollen is the cause of dysentery, and that it is injurious to adult bees. I am calling for these proofs yet, after carefully reading Prof. Cook's article. All that the Professor undertakes to show, is "that bees are often better off with no pollen in winter." He adds, "*Perhaps*, too, they take some of the nitrogenous food, and as a result, become diseased and die." So long as that "perhaps" sticks there, I shall keep calling for proofs.

It may be "that bees are often better off with no pollen in winter." This is probably true as "often" as there is an unusually mild spell in mid winter, such as the Professor describes, leading to premature breeding.

I can assure the Professor and all others, that I never write for the mere sake of controversy. My aim is to elicit facts—to come at the truth. In order to do this, I want not theories or opinions, but proofs. I propose to keep on calling for these, until they put in an appearance.

Prof. Cook tells us he has for several winters given one-half his bees pollen, and the other half none. In all cases, it has happened that the bees without pollen had no brood in the spring, while in the rest he says, "we almost always found brood." Is it considered a detriment to a colony to have brood started at the end of winter? I ask for information. I may be an old fogy and all behind the times, but I have always regarded it as one proof of a colony being in "good order and condition," and having wintered well, when there is more or less brood in it, especially *more*, at the opening of spring. It may be, I have never denied it, but only called for proofs—that it is better to deprive colonies of combs containing pollen, when preparing them for winter, but if so, it will add considerably to the labors, quite abundant enough, of bee-keepers who have large apiaries.

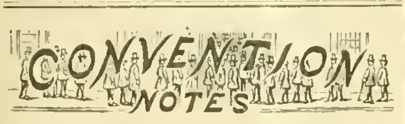
I am not a chemist, and cannot pretend to discuss "hydro-carbon," "nitrogen," etc., with the Professor, yet I may venture to remind him that pollen is not only nitrogenous, but carbonaceous, albuminous, etc. It is good for young bees, like "milk for babes," and as milk isn't bad for adult men and women, perhaps pollen may not be bad for mature bees. Who knows? The fact that they *can* do without it, does not prove that they are better without it. Bees *can* do without honey, and live on sugar syrup, but most of us would rather see our hives well stocked with honey in the fall, than be under the necessity of feeding artificially for winter supplies.

There is yet another sentence in Prof. Cook's article which I read with astonishment. It occurs toward the close. He says, "I have never found any support of the theory of the late Mr. Quinby, that bees secrete a dry powder in winter." I am greatly surprised to find the Professor calling this idea into question. But, stop; perhaps like the original and heterodox individual he refers to in the former part of the article, he only "calls for proofs." Well, L. C. Root, p. 254, "Quinby's New Bee-Keeping" adduces proofs, and says, "Careful observations by others, as well as myself, confirm the truth and importance of his (Mr. Quinby's) conclusion." Has Prof. Cook tested this matter by the little experiment suggested by Mr. Root, or by chemical analysis?

Searching for what information I could in regard to the excreta of bees, I find that Dr. Donhoff's analysis gives "one-third uric and hippuric acid, and the residue of indigestible portions of pollen." Has this analysis ever been corrected? If not, how does the no-pollen theory square with it? I don't know whether the excreta analyzed were summer or winter, normal or abnormal, but, anyhow, here is a doctor of no mean repute, who states that these excreta contain two-thirds "of indigestible portions of pollen."

My library is not extensive; I am not a professor either of entomology or chemistry; the study of apiculture can only be with me a species of knitting-work, filling up the interstices of leisure woven into a very busy life; and I assure "my learned friend," that I write these things as a docile disciple, rather than as a dogmatic teacher. I am one of a very big class, gathered every week in the school of the AMERICAN BEE JOURNAL. We are not much past "the A, B, C, of bee-keeping," and if this article moves the Professor to give us a lecture, many others will be thankful for it as well as myself.

Listowel, Ont., Jan. 14, 1882.



CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Jan. 24, 25—Indiana State, at Indianapolis, Ind.

25—Northeastern, at Utica, N. Y.
Geo. W. House, Sec., Fayetteville, N. Y.

Feb. 8, 9—N. E. O. & N. W. Pa., at Jamestown, Pa.
W. D. Howells, Sec., Ashtabula, Ohio.

9—Northeastern Maine, at Dexter, Maine.

April 11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May — —Champlain Valley, at Bristol, Vt.
T. Brookins, Sec.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

☞ The Northeastern Bee-Keepers' Association of Maine, will hold its second annual meeting at Grange Hall, Dexter, Me., Feb. 9, 1882. An invitation is extended to all persons interested in bees and honey, to attend, and bring their pet bee hives, smokers, extractors, etc., that we may compare the merits of each different kind. The President will give an address, and we shall hear the Secretary's report, and elect officers for the ensuing year. WM. HOYT, *Sec.*

Translated by A. R. Kohnke.

Austro-German Convention.

The Austro-German Convention met at Erfurt, Sept. 5-8, 1881, and was probably the largest in the world, being attended by more than 700 bee-keepers from all parts of Europe.

One of the first actions of the Convention was to elect Mr. Vogel, of Lehmannshoefel, near Cuestrin, Permanent Vice President of the Association. Having paid due homage to their deceased members, especially, their former Vice President, A. Schmid, Von Berlepsch and others, and disposed of other matters of minor importance, the debate was opened by Dr. Dzierzon, who remarked that the practical part of bee-keeping had made wonderful progress since the days of Aristotle and Virgil, as also the theories or natural history with reference to the bee, but there were still some mysteries left unexplained, for instance, What is it that transforms a worker bee larva into a queen? Does it depend on the quantity or quality of the food? He supposed it to be the latter;* for, whenever royal jelly was transferred from a queen cell to a worker cell containing a larva, the bees would invariably enlarge that cell to rear a queen.

Another question to be answered was: When and how are workers qualified to lay eggs sometimes, even in colonies having a good queen? A third point was to the speaker not yet perfectly clear, viz: The preparation of royal jelly to feed larva and queen.

Mr. Vogel answered this last question, referring to Dr. Leuckart's and V. Siebold's investigations,† stating also that royal jelly stood in the same relation to the bee, as the milk to mammals, viz: being a secretion of certain glands. Queen larvæ got this exclusively as food, while worker bee larvæ obtained that only during the first 5 or 6 days, and before sealing the cell containing the same they are provided with a store of honey and pollen.

Rev. Rabbow mentioned another point not yet explained, viz: What is the cause that on crossing two different races of bees, for instance, German drone bee and Italian queen, the progeny of such a queen is at the beginning purely Italian, then purely German, and finally mixed?

Mr. Ilgen mentioned another mystery, viz: Why do young queens suddenly become barren, after having been very prolific? Exhaustion by over-exertion and exhaustion of sperm in the seminal sack were given as reasons, and concurred in by Hilbert and others, who also said that instead of sending money to foreign countries for bees and queens, the latter of which arrived very often in an injured condition by rough handling during transportation, over which the shipper had no control, the bee-keepers should aim to improve the stock they had, by selecting first-class colonies to breed from, and if bee-keepers in Germany had to buy queens, to get them of bee-keepers or queen-breeders of Germany who were reliable, and were known for the purity of their strain of bees.

Messrs. Lehzen, Gravenhorst and others concurred with reference to using perforated zinc to confine the queen to a limiter number of brood-combs, their experience being that the use of the same was injurious—1st. Because loaded bees on coming home would with their load go to the brood-combs first, trying to find room in or near there to deposit the gathered stores, and only after a vain effort would return to the honey department; this consumed some time and tired the bees, hence proved to be a loss instead of gain. 2nd. Bees or colonies, where the queen is thus confined, are not as industrious as others where that is not done.

The next question considered was "the value of the different races of bees." Those considered were the Cyprian, Syrian, Egyptian, and especially the Caucasion bee. Mr. Hilbert opened the discussion by saying that with reference to the Caucasian, their character ran to extremes. The pure race, as imported, could hardly be induced to sting being very docile. 2d. They were extremely lazy. 3d. Very poor breeders, beginning later in the spring and stopping sooner in the fall, than any other race. (Mr. H. experimented with 5 Caucasian colonies). But on rearing queens from such an one, this second generation, or cross between them and any other proved to be indefatigable fighters, excelling in this respect the Cyprians by far; besides that, the pure race, as lazy as they are, are born robbers, attacking the strongest colonies. As to Cyprians, he said they were very prolific, good honey gatherers, but when he wanted to take the honey from such a colony, they would most of the time get the better of him, stinging everything coming within their reach.

Mr. Vogel, in stating his experience with 12 pure Caucasian colonies, said that his colonies in the spring of 1879 built up very well, in fact, better than any others, and were his strongest colonies in July, but—no honey. Could not be induced to sting on the hottest day, or when queenless. They wintered very well from 1879 to 1880; in the spring of 1880 developed the same as before—hives being chocked full of bees and brood in July, but no honey.‡

Getting rid of those he had, he sent for 4 others, from the same source, 2 of which proved to be the very opposite of what he had had before. In the fall they were very populous and heavy with honey. In color they were almost identical with the Italians.

Mr. Dathe, Jr., said that a cross between the Caucasian and German bees produced very irascible bees.

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* It is rather surprising to observe a doubt about this matter with an old, experienced bee-keeper, as Dr. Dezierzon is, after the investigations of V. Siebold in 1872.—TRANSLATOR.

†The salivary glands of the bee by Siebold, 1872. —TRANSLATOR.

‡ There seems to be a limit to prolificness, as stated in my article on "coming bee" sent to the AMERICAN BEE JOURNAL. Those bees probably used up all their honey they gathered, to rear brood.

Mr. Hans, St. Petersburg, Russia, from whom all these queens and colonies had been obtained, admitted the robbing propensities, docility, excessive breeding, and consequently, little honey. His bees were confined 218 days during the cold winter weather.

Mr. Hilbert remarked that the color of the pure Caucasian was a dark gray, and not like the Italian, to which he did not get an opposing reply.

Mr. Vogel claimed that a race or strain of bees may be pure without preserving the color of the queen or colony bred from because such a constancy did not exist in nature; nature was not encased in an iron jacket, but changable.

Mr. Walther substantially admitted the points Mr. Hilbert stated.

Dr. Dzierzon said that he was the first who imported Italian bees into Germany, and wherever the purity of the race had been preserved, they had always been observed to be more serviceable than any other, being more docile, prolific and good honey gatherers; as a criterion, on first sight, he would consider the color. To this last remark Mr. Hilbert objected, as Cyprians were better colored, but worse to handle.

Rev. Deidrert claimed that there was no constancy of color with Cyprians.

The next question considered was, how to insure successful and profitable bee-keeping in Germany. Bee-keepers there claiming, that on account of the large importation of adulterated honey [I suppose, glucose —Translator.] they could not sell their honey at a reasonable figure, and it was resolved to petition the government to raise the duty on all imported honey and wax, from 33 cents per 100 pounds, as it has heretofore been, to $2.25 per 100 pounds for honey, and for wax, from 88 cents to $4.50 per 100 pounds, United States money and weights. Several bee-keepers claimed to have traced foul brood to American honey, where bees had had access to empty honey barrels, the contents of which had been used by confectioners. Having discussed this question in all its bearings, the Convention adjourned to meet next year in Wiener, Austria.

[It seems to me our German bee-keeping friends are very unreasonable as to prices obtainable for wax and honey, for one bee-keeper says, five years ago he got $1 per pound for wax, and now he cannot get more than 22 cents. That is still more than we can get here, leaving out of consideration that one dollar goes much further in Germany than in this country. So also for honey, they ask for buckwheat, in comb, 18 cents, can any bee-keeper in this country ever get such a price for such honey? When they object to adulterated honey they are perfectly right, and it seems to me to be within the jurisdiction of Congress to forbid the exportation, sale or manufacture of any sweet under any other but its real name, as it injures a large trade in honey and wax. The bee-keepers of this country will soon feel the duty imposed upon honey by the German government. The attention of the Imperial health office in Germany has been called to this fraud, after having it forbidden in Germany, they will next likely forbid importation of that stuff called clucose or manufactured grape sugar, and adulterated honey in any shape, especially if they regard foul brood as having been imported from this country.—TRANSLATOR.]

SELECTIONS FROM OUR LETTER BOX

Flights in Winter.—Is it indicative of the normal condition of a colony of bees in the cellar, with mercury at 40°, to continue a humming sound? 2. Is it better to give them a fly in the open air, if the temperature is right, once or twice during the winter? I have thought they might become so thoroughly aroused as to consume a large amount of honey, also cause the queen to commence rearing brood, which must perish before maturity.

W. WAKEFIELD.

St. Paul, Minn., Jan. 13, 1882.

[1. The humming noise should be almost inaudible; but we doubt if they are ever perfectly quiet when in a normal condition.

2. We would, by all means, give them one or two good cleansing flights, if the temperature is suitable, allowing them to remain outside until they become quieted from chilling, when they can be put back in the cellar without damaging results. During the few days in winter when they can fly, the queen cannot be induced to deposit eggs enough to work any harm, or to cause an unusual consumption of honey.—ED.]

Syrian Bees.—Please give a description of the Syrian bee in the JOURNAL, and address of some one who has them for sale. OTTO S. DERBY.

Portland, Mich., Dec. 31, 1881.

[The Syrian has been several times described in back numbers of the BEE JOURNAL. For names of dealers, see our advertising columns.—ED.]

What Ails my Bees?—Last winter my bees nearly all died, with plenty of honey; this winter, they come out of the hives and do not go back. Every morning I find numbers of them lying in front of their hives. They are on the summer stands, raised up ½ inch, with small blocks. Last night about five inches of snow fell, and this morning you could see dead bees lying all around on the snow. The hives feel heavy, and they certainly must have honey, as they were all fed until very late in the fall. What is wrong? and how can I remedy it? They never acted this way before. They seem to come out of all; I have 14. SAMUEL M. LILLEY.

Montgomery Sta., Pa.

[Those are old bees, most or all of which come out of the hives to die. It is better they should come out and perish, than remain to die in the hives before spring.—ED.]

Timber for Sections.—Will you please state whether honey in one-lb. sections, made of basswood lumber, sells as readily and at as high a price as the same quality of honey in the same size sections made of poplar. It is claimed by those having the poplar sections for sale, that honey in them will sell for 2 cents a pound more than if in basswood. W. N. HOWARD.

St. Johnsbury, Vt., Dec. 30, 1881.

[It is certainly a mistake; basswood makes quite as pretty and durable a section as poplar, when nicely dressed and sand-papered.—ED.

My First Year's Experience.—One year ago I put 10 good colonies of bees in the cellar; 8 of them came out in good condition last spring; 2 were weak in numbers, but plenty in stores. I increased to 20, bought 3, and one came to me. I took 1,500 lbs. of extracted and 30 lbs. of comb honey. I put in the cellar 24 good colonies in good condition on Nov. 5.

SAMUEL SANDERSON.

Glenallan, Ont.

Box-Hive Men not Progressive.—There are but few who keep bees in this section; which are kept mostly in box hives, and it seems almost impossible for such persons to change their opinion in regard to hives and management of bees. At our county fair I exhibited honey, and distributed copies of the BEE JOURNAL among those who were interested in bee-keeping. I hope that I may derive as much information from the BEE JOURNAL during the coming year as I have the past.

THEO. D. THOMAS.

Pleasant Valley, N. Y., Jan. 16, 1882.

Well Satisfied.—I have kept bees for 13 years, beginning with 3 colonies, and have had varied success. I now have 130 colonies. Last year was a famous season for honey, the white clover being simply immense. I do not get as much honey as some of whom we read in the BEE JOURNAL, but I assure you I had a large quantity last fall. I am satisfied if I get 40 lbs. of box honey per colony. I have so much farm-work to do that I cannot run my bees just as I would like to, but you never saw a nicer bee-yard than mine. ABRAM HUNT.

Rodman, N. Y., Jan. 9, 1882.

Fall Honey for Winter.—Bees are wintering well, so far, in this locality. The weather has been mild, and the prospect is good for an early spring. The bees gathered enough honey last fall to winter on, from buckwheat and wild flowers, which was rather

better than was supposed, being so dry last fall. GEORGE COLE.
Freeport, Ind., Jan. 14, 1882.

Moving Bees over Rough Roads.—In the BEE JOURNAL for Jan. 11, page 29, I notice A. L. Etherington inquires in regard to moving bees over rough roads. I have had some experience in that line, and will give my views of it. Wait until warm weather, remove all combs containing honey, fasten the remaining combs securely so that they cannot jam against each other and mash the bees, remove the top of the hive and cover at least ½ of the hive with wire screen, giving them all the fresh air they need (and that is a good deal,) load them into a wagon that has springs enough to ease off the hard jolts, put some straw under them, place them so that the frames will be *cross-wise* of the wagon, and wedge the hives in tightly, so that they cannot bump against each other, and they can be moved with perfect safety. If the heavy combs of honey are left in the hives they may break down and nearly ruin the bees. The combs of honey can be packed in empty hives (close together) and there will be but little danger of their breaking down. CHAS. E. MC RAY.
Canon City, Colo., Jan. 14, 1882.

Bees in Sawdust Cellar.—I have 47 colonies in a sawdust cellar with chaff cushions over the frames. The entrance is left open—should it ever be stopped with wire cloth? The honey season was good in this part of New York. A. BURRILL.
Cuba, N. Y., Jan. 12, 1882.

[Do not stop the entrance with wire-cloth; but few contingencies can arise when it will be an advantage—never when everything is in proper condition. Often serious damage may be done by closing it entirely.—ED.]

White and Sweet Clovers.—I sowed twenty pounds of sweet clover seed last November, and am thinking of sowing some more in the spring, on ground that I will seed to oats. How would it do to sow white or Dutch clover with the sweet clover, for early summer pasture, for the bees, or would the sweet clover be likely to kill the other clover? If both would thrive on the same ground we could have bloom from the middle of May until frost. W. H. RAFTERY.
Pittsfield, Ill., Jan. 19, 1881.

[But little, if anything, will be gained by sowing white and sweet clover together. The latter will yield a more abundant stock pasture than the former, will bloom almost or quite as early, will yield triple the honey bloom, and will last the season through. The honey is quite equal to that from white clover, and bees will neglect the white clover to gather it. Again, neither will bloom till the second season to any extent, so there will be no advantage gained on that score. We think eventually, with the least encouragement, the sweet clover would take full possession of the field, and the bees would rejoice with you over the "survival of the fittest."—ED.]

Bees in Maryland.—My bees went into winter quarters on their summer stands, with quilts over the frames, early in October, in very good condition. They flew on twenty days in December; their last flight being on the 28th, since which the ground has been frozen. It was snowing last night, and also to-day. I am greatly pleased with the JOURNAL and think it worth very much more as a weekly than its relative cost. A. DREVAR.
Annapolis, Md., Jan. 6, 1882.

Bricks as Absorbents.—In my letter published in the BEE JOURNAL for Jan. 11, 1882, I wish to make this correction: where it speaks of two dry "blocks" it should have read, *two dry bricks*. These I put in to absorb the moisture in the hives, in connection with the quilts. O. B. SCOFIELD.
York, Maine, Jan. 16, 1882.

How to get Dead Bees out of Combs.—Stand them, one in a place, where mice can get at them, and where nothing else will bother them. As fast as the mice clean them, take them away and put others in their place until you get all your combs cleaned up. I think mice are the best machine for this purpose. M. H. MILSTER.
Frohna, Mo., Jan. 19, 1882.

Doing Nicely.—I have 30 colonies of bees in the cellar since Nov. 15 last, and they appear to be wintering well. I ventilate my cellar with a 6-inch pipe running under ground about 25 feet to the outside, and from the bottom of my cellar I have a 4-inch pipe leading into a chimney, so that I can regulate the temperature reasonably well; also have 15 colonies of D. Daninher's in the same cellar. I wish the BEE JOURNAL abundant success. JOHN CORSCOT.
Madison, Wis., Jan. 20, 1882.

Merits of Hives for Wintering.—In August, 1880, I bought 1 colony of Italians which I wintered in the cellar; in 1881, I increased to 5, took 20 pounds of honey, and got the bees in good shape for winter. In September I bought 4 colonies more. In October I put the quilts on top of the frames. In November I put the hives in rough boxes, gave them entrance through the rough boxes, packed all around the hives with chaff, giving them ventilation by putting blocks under the lids or tops. Last week I examined them to see if they had enough ventilation. The bees were stepping around on the upper edge of the combs most beautifully indeed. On December 28, I bought and brought home 6 colonies of black bees which I packed the same way, but they have taken no flight yet; the weather turned cold the next day and has been too cold for bees to fly ever since. Please answer the following questions. Is there any difference in wintering, better or safer, on the Langstroth or the American frame—that is, will they cluster nicer and in better shape in real cold weather, if the hives are packed, ventilated, and a quilt over the frames, all just alike, the colonies being about equal? Is there a patent on the N. C. Mitchell hive? Please excuse all mistakes. A. F. YODER.
Goshen, Ind., Jan. 14, 1882.

[You will probably observe no difference in the wintering of the bees, whether in Langstroth or American hives, provided, as you say, all are "packed, ventilated and a quilt over the frames just alike, the colonies being about equal." Last winter, which was cold and long enough to furnish a test for almost any reasonable man, demonstrated that there was but a trifling percentage of difference in the two styles as to success in wintering. The only feature patented about the so-called Mitchell hive was the peculiar construction of his division-board, which consisted of cloth, rubber or paper binding on the ends.—ED].

Dodge's New Feeder.—I have, by a long series of experiments and close observation, become satisfied that but a small portion of the colonies lost in wintering freeze to death, but starve, on account of their stores becoming inaccessible in cold and frosty weather. As the heat naturally rises above the cluster, it often happens that a colony starves to death with plenty of honey within a few inches, but inaccessible on account of frost and cold in the remoter portions of the hive. I think that thousands of colonies might be saved annually from this cruel fate, and loss to their owners, were the proper means provided that would enable them to reach a proper amount of food at all times, and in a temperature corresponding with that of the cluster. In presenting my feeder to the bee-keepers of America, I claim to have accomplished the following objects: 1. I place the feed directly over the cluster, and accessible at all times, in a temperature corresponding with that of the interior of the hive; 2. It feeds equally well summer or winter; 3. It feeds with equal facility, syrup, candy, sugar, comb honey or extracted, or any suitable bee-feed; 4. It feeds without disturbing the bees; 5. It can be covered and nicely tucked in with the quilts or chaff cushions without any escape of heat; 6. It is a perfect upward ventilator, and consequently an absorbent of moisture, keeping the cluster dry at all times, and when not required for top feeding and ventilation, is equally as effective for entrance feeding. U. E. DODGE.
Fredonia, N. Y.

Oldest Bee Paper in America — THE AMERICAN BEE JOURNAL — Established in 1861

RATES FOR ADVERTISING,

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance:

For **4** weeks		**10**	per cent. discount.
" **8** "		**20**	" "
" **13** "	(3 months)	**30**	" "
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Discount, for **1** year, in the Monthly alone, **25** per cent., payable in advance.

Discount, for **1** year, in the Semi-Monthly alone, **40** per cent., payable in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

Transient Advertisements payable in advance. —Yearly Contracts payable quarterly, in advance.

THOMAS G. NEWMAN,
974 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

◆

The Apiary Register devotes 2 pages to each colony, ruled and printed, and is so arranged that a single glance will give a complete history of the colony.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.
G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

◆

Change of Time.—So as not to conflict with other meetings, the time of holding the Bee-Keepers' Convention at Jamestown, Pa., has been changed from Feb. 1st and 2d, to Feb. 8th and 9th. This promises to be one of the most interesting meetings yet held. A good programme has been made out, and all interested in bee-keeping will find it to their advantage to attend.
M. E. MASON, *Pres.*
W. D. HOWELLS, *Sec.*

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Jan. 23, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The market has an upward tendency, and I am now paying the following prices in cash: Light comb honey, in single comb sections, 17@21 cents; in larger boxes 2c. less. Extracted, 8@10c.

BEESWAX—Prime quality, 18@22c.
AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

I pay 8@11c. for extracted honey on arrival, and 16@18c., for choice comb honey.

BEESWAX.—18@22c., on arrival. I have paid 25c. per lb. for choice lots.
C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—During the first days of this month I found but a very limited demand for honey, but for the past few days the sales have been more frequent, with an inclination to buy small quantities. The amount of choice comb in sight is small, compared with the corresponding date of last year, and am inclined to the belief that all of the white uncandied comb will be exhausted in February.

I quote: Choice white comb, in 1 to 1½ lb. sections, 20@22c.; same in 2 to 3 lb. boxes, 17@20c.; dark and mixed, in 1 to 3 lb. boxes, 12½@15c. Extracted, white, 10@11c.; dark, 9c.
R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—Business in this line at present, as far as can be learned, is of the veriest retail character. Quotations are nominal and unchanged.

We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8¾@10c.; dark and candied, 7@8c. BEESWAX—23@25c.
STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Plentiful and slow for all save choice bright comb—this sold readily; comb at 18@23c.; strained and extracted 9@11c. to 12½c.—top rates for choice bright in prime packages.

BEESWAX—Steady at 20c. for prime.
R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—The market since Jan. 1st has revived considerably; best No. 1 white, in 1 and 2 lb. sections, now sells at 20c@22c.; buckwheat dull at 17@18c. Extracted, in small packages, 12c.; in half bbls., 11c.

BEESWAX—22@25c., and very scarce.
A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—The supply is full, and trade is lively. We quote as follows: White comb, in small boxes, 18@21c; dark, in small boxes, 15@17c. Extracted, white, 10@11c.; dark, 7@8c.

BEESWAX.—Prime quality, 21½@23c.
THORN & CO., 11 and 13 Devoe avenue.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.
CROCKER & BLAKE, 57 Chatham Street.

◆

"How do You Manage," said a lady to her friend, "to appear so happy all the time?" "I always have Parker's Ginger Tonic handy," was the reply, and thus keep myself and family in good health. When I am well I always feel good-natured." See other column. 1w4t

◆

To Promote a Vigorous Growth of the hair, use Parker's Hair Balsam. It restores the youthful color to gray hair, removes dandruff, and cures itching of the scalp. 1w4t

BEES FOR SALE.—I will sell 16 colonies of bees in May, 1882, nothing preventing. Those wishing to buy will please write to
J. REYNOLDS, JR.,
4w1tp Clinton, Kennebec County, Maine.

Chaff and Langstroth Hives.
APIARIAN SUPPLIES
kept on hand and made to order. Send for price list. Be sure and state whether or not you now have my 1881 circular.
5m3t **S. D. BUELL,** Union City, Mich.

WANTED 5000 AGENTS AT ONCE.
New Business, Legitimate, Pleasant, Profitable. *Orders solicited from Business and Professional Men, in Cities and Villages only.* Send 3c. stamp for circulars and terms; or better, to *make sure of territory and save time,* send in registered letter $3.50, which pays for samples of our supplies that sell for $8.64, and we guarantee their delivery to your order all charges prepaid. Address, C. VENTON PATTERSON, West Burlington, Otsego Co., N. Y. 4w1tp
Mention this JOURNAL in writing for terms.

BE SURE
To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian, Cyprian and Holy Land Queens and Bees.
J. C. & H. P. SAYLES,
4sm15t Hartford, Wis.

G. M. DOOLITTLE SAYS:
Stanley's Vandervort Foundation
for sections is **"even thinner than natural comb, and is the very best foundation made."** See BEE JOURNAL of Jan. 3, and *Gleanings* for Jan., pages 14, 15. We also make high-walled Vandervort foundation for brood chamber to fit any size frame. Send for samples and prices, or send $10 for 20 lbs. 10 sq. ft. per lb., to
3sm4t G. W. STANLEY & BRO., Wyoming, N. Y.

5 per cent. discount on orders of $10.00 or more before February 1st. This was incorrectly printed in the BEE JOURNAL last week.

THE KANSAS BEE-KEEPER,
Devoted entirely to the best interests of those who keep bees. The question department, conducted by Dr. Wm. R. Howard, is of especial interest to beginners in bee-culture. Jas. Heddon will write a practical article for every number for 1882; 20 pages handsomely gotten up in book form. Every number worth the price of a year's subscription. Sample copies and premium list free to any address. Agents wanted. Address,
SCOVELL & ANDERSON,
28wtf Columbus, Kansas.

Muth's Honey Extractor,
Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.,
Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**
☞ Send 10c. for Practical Hints to Bee-Keepers.
1w1y

FOUL BROOD CURE.
The undersigned will publish about February 1st, a concise method of how to cure Foul Brood, as successfully practiced by apiarists in Germany, giving exact weights, measures, temperature, etc. Price about 25 cents. Not wishing to issue many more copies than wanted, I would ask those bee-keepers, who wish to obtain a copy, to let me know their intention by Postal Card.

Besides that, I shall put up for the convenience of bee-keepers the whole apparatus necessary, composed of two graduates, thermometer, atomizer and bottle with solution enough to cure and disinfect ten or more colonies, including a pamphlet with every box sent. Price about $5.00. Those wishing to obtain such a set should also declare their intention by sending a postal to
ALBERT R. KOHNKE, Youngstown, O.
☞ Application for phamphlet or set of apparatus should be sent in as soon as possible to insure a copy of the former. ☜ 4w1t

WANTED AGENTS to take orders for the best selling book on **FARM** and **HOME** topics ever published. Sells at sight. Ladies can handle it. Has no superior in any language; 1,050 pages, with nearly 2,000 illustrations. Terms free on application. **50 Per Cent. to Agents.**
F. L. HORTON & CO., Pub'rs,
4w5tx **Indianapolis, Ind.**

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
1w1y Hamilton, Hancock Co. Ill.

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen	$4.50
2 frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1..	2.50
" " per half doz., after July 1	13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,
1wtf Burlington, Iowa.

BEES for SALE.

I have for sale about **300 Colonies** of the

Celebrated Arkansas Brown Bees,

which I will dispose of in lots of TEN COLONIES OR MORE at very reasonable prices. They are in ten-frame Langstroth and box hives. These bees are said to be large, remarkably amiable, good section workers, and excellent comb builders. Owing to the mildness of the Arkansas winter, they will be very strong in bees, and spring dwindling will be avoided. These bees can be delivered on board steamer, near Memphis, before the middle of March, and before the early honey flow and swarming commences. Write soon for bargains, as I will close out both my Southern Apiaries by March 15th, or remove them North.

I am also booking orders for Italian Queens, Nuclei and Colonies, to be supplied from Chicago in June. Address,

ALFRED H. NEWMAN,
972 West Madison St., **CHICAGO, ILL.**

Bees and Queens

FULL COLONIES of ITALIAN BEES,

From my Apiaries.

QUEENS and NUCLEI IN SEASON.

☞Satisfaction guaranteed. Circular on application. **J. H. ROBERTSON,**
50wtf Pewamo, Ionia Co., Mich.

J. V. CALDWELL,

CAMBRIDGE, ILL.,

Wants every reader of the good old AMERICAN BEE JOURNAL to send his name and Postoffice address for a copy of his new Illustrated Circular of Bee-Keepers' Supplies. It may pay you to read it before ordering your supplies.

☞Beeswax wanted. 3w26t

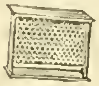
PRIZE QUEENS FOR 1882,

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

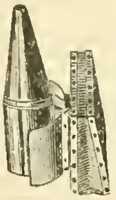
FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.



The Original Patent

BINGHAM BEE SMOKER

AND

Bingham & Hetherington

HONEY KNIFE.

Send a card for testimonials, or half-dozen rates, to

BINGHAM & HETHERINGTON,
ABRONIA, MICH.

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
974 West Madison Street, **Chicago, Ill.**

FOR SALE—150 Colonies of Italian Bees in improved Quinby hives, in prime condition.
39w1y L. C. AXTELL, Roseville, Warren Co., Ill.

KNOW THYSELF.

GOLD MEDAL Awarded the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self-Preservation;" bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only $1.25 sent by mail; illustrated sample, 6c; send now. Address Peabody Medical institute or Dr. W. H. PARKER, No. 4 Bulfinch st., Boston. 22w1y

65 *ENGRAVINGS.*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

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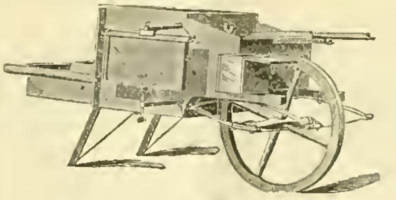
974 West Madison Street, CHICAGO, ILL.



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—:o:—

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It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Bulletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To al taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

—:o:—

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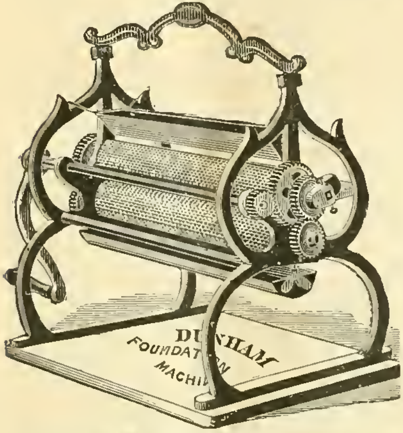

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Dzierzon Theory :—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. **15** c.

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Extracted Honey ; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. This contains many useful hints.—Price **15c.**

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TOPICS PRESENTED THIS WEEK.

Editorial—

Items 65, 66. 67
Unfair Copying 65
The Future Prospect 65
Wood Separators 65
New Price Lists 65
Method for Granulating Glucose 66
The Apiary Register 66
Another Reform Needed 67

Among Our Exchanges—

A Warning Voice 67
Sentiment and Bee-Keeping 68
What Hive to Use 68
Does it Pay? 68

Correspondence—

American Apiary in Cyprus 69
Pure Bees—A Short Review 70
Bee-Keeping for Ministers 70
Bee-Keeping on Stilts 71
Is the Problem of Wintering Settled! 71
Those Fine Bees in Canada 72
Exact Reports of Honey Crops 72
Foul Brood and Its Cure 72
Foundation for Sections 72
The Effect of Bee-Stings 73
Is this All Fiction? 73

Selections from Our Letter Box—

Unfortunate 74
Bees in Kentucky 74
Honey Pop-Corn Balls 74
Bee-Culture in D. C. 74
Kentucky for Bee-Keeping 74
Artificial Comb Honey 74
Bee-Culture in Tennessee 74
Keep the Ball Rolling 75
California Prospects 75
A Missing Bee Man 75
Can t Be? 75
Persimmon Bloom for Honey 75
Labeling Tin Cans of Honey 75
A Peculiar Case 75
From a four-year-old Apiarist 76
Terribly Severe 76
Bees have Devoured Little Honey 76
Feed the Bees 76
The First Blood 76
Ants in the Apiary 76
Bees Doing Well 76
Dreadful! Whew! 76

Convention Notes—,

Local Convention Directory 76
N. W. Illinois and S. W. Wisconsin 76

The Future Prospect.—The editor of the *Bee-Keepers' Magazine*, says:

> In nature, as well as in almost all things, one extreme is apt to be followed by another in the opposite direction, and judging from this standpoint we may expect nature to favor bee-keepers in 1882.

◆

Unfair Copying.—We are always glad to have our Exchanges copy articles from the BEE JOURNAL; still more to have them endorsed by those who copy them; but when they get so enthusiastic as to copy them without giving the BEE JOURNAL due credit—thus palming them off for their own production—it is a little "too thin." We have noticed scores of our articles thus copied, going the rounds of the agricultural papers, credited to some other periodical, because some one desiring honestly to give credit, mentioned the paper from whom it was last taken, after being stolen from the BEE JOURNAL. An Indiana paper copied our editorial article on "Sweet Clover in Colorado," from page 20, but failed to give any credit. A Baltimore paper, a few weeks ago, had a column article, copied, word for word, from an editorial in the BEE JOURNAL, with the name of a "correspondent" signed to it. A Louisiana paper copied our experiments with comb foundation, under its editorial heading, appropriating our experiments, arguments and conclusions, without as much as saying—"By your leave."

Since the above paragraph was put in type, we are advised that the official report, as first published in the *Colorado Farmer*, was incorrect, and our editorial was predicated upon that report. Mr. Grimes had but a single acre of sweet clover. Will our Indiana contemporary please modify that editorial on "sweet clover in Colorado" by making the corretion?

◆

Wood Separators.—Mr. C. R. Isham, Peoria, N. Y., remarks that the apiarists in that part of New York, will for the future use wood separators, in place of tin, for surplus sections. He thinks they are preferable in many respects. So far as our observation is concerned, their use has not been a success, but perhaps the difficulties of the past may be overcome, and we shall await, with interest, reports from those using them the coming season.

◆

New Price Lists.—Catalogues and Price Lists for 1882 are on our desk from the following dealers in apiarian supplies:

A. H. Newman, Chicago, Ill.
Dr. Wm. R. Howard, Kingston, Texas.
T. F. Bingham, Abronia, Mich.
Paul L. Viallon, Bayou Goula, La.
Jas. Forncrook & Co., Watertown, Wis.

◆

☞ To any one sending a club of two *new* subscribers for 1882, we will present a volume of the BEE JOURNAL for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our *new* subscribers will be pleased to learn that they can get it for $1.00, by sending for it *at once*, before they are all gone.

◆

☞ We will send Cook's Manual bound in cloth, postpaid, and the Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Method for Granulating Glucose.

Through a recent extract from the Philadelphia *Dispatch*, published in the Chautauque (N. Y.) *Farmer*, and forwarded to us by Mr. William Bolling, we learn a company is now being organized in Philadelphia for the manufacture of Glucose from cassava or manioc plant, which grows luxuriantly in our most Southern States, in Mexico, Cuba, and, in fact, in all tropical and semi-tropical countries. The roots or tubes of the plant are used. From the best authorities we learn "the juices of the root are poisonous, but by treatment with pressure, heat and water, the poisonous qualities are removed, and the root yields a starchy substance called *cassava*, which is much employed as food. Tapioca is purified cassava." It is also used in making a fermented and highly intoxicating liquor. Since Glucose production has reached the enormous amount of 200,000 tons annually, in this country alone, the manufacturers have left no means untried to discover a substitue for corn, which has so advanced in price, owing to drouth and other causes, as to make glucose a trifle less profitable. The prospectus of the company now being formed to make glucose gives some comparisons as to the cost of raising corn and cassava. "The average production of corn in the States of Pennsylvania, New York, Ohio, Michigan and Illinois is 35 bushels to the acre. The amount of glucose produced from one bushel is 30 pounds or 1,050 pounds to the acre. Well authenticated evidence is at hand to the effect that 20 tons of cassava to the acre is no unusual crop in Florida. This, at 56 pounds to the bushel, would give a yield of over 700 bushels per acre, or at the rate of 30 pounds of glucose per bushel, would produce over 21,000 pounds of glucose per acre. A comparison of the yield of glucose from corn and cassava shows that 1,000 acres of corn yields about 500 tons of glucose; 1,000 acres of cassava yields about 10,000 tons of glucose."

Heretofore we have felt tolerably safe in the selection of our table sugars, as the coffee A and granulated grades were regarded as quite pure, owing to the supposed impracticability of granulating the glucose products; but all this security has been removed by the reference made by Dr. Kellogg, in the Michigan State Bee-Keepers' Convention, to the feasibility of granulating glucose as perfectly as cane sugar can be done, and which is confirmed (if confirmation was required) by the following startling publication in the Chicago *Tribune*, giving the meager details of a discovery to remove from us our only dependence in sugars and their purity:

> Dr. William Robinson, of this city, has discovered a process for converting glucose, or grape sugar, into the pulverized, granulated, or loaf forms—a process which, judged from the work it does, is apt to play an important part in the refining of this class of sugars. The Doctor's secret combines both chemical and mechanical action for the removal of the gum, acids, and all other impurities from the lump of crude sugar and the transformation of the purified article into either the granulated, pulverized, or loaf form. Dr. Robinson showed several samples of the crude and the purified sugar to a *Tribune* reporter yesterday, and the results accomplished by his process were something wonderful. The crude sugar itself comes in hard lumps of various sizes, slightly yellow as to color, and decidedly "waxy" as to touch. After undergoing the purifying process, it is perfectly white, dissolves readily in water, and is about half as sweet as cane sugar, the rank taste of the crude product having been entirely removed. The purified sugar can be readily mixed with the cane, but, whether alone or mixed, makes a very palatable article.
>
> The Doctor claims that he can convert crude grape sugar into the refined article, either granulated or pulverized, at a cost not to exceed a quarter of a cent per pound. When thus converted and purified, he claims that it will not cost four cents a pound at wholesale, which is considerably less than the wholesale price of other sugars. He has demonstrated that it is as feasible to convert 100 barrels a day as it is to convert half a pound at a time, though his experiments as yet have not proceeded upon a large scale. It is understood that two or three heavy glucose manufacturers, impressed with the importance of a process which promises to do so much for the future of grape sugar, have offered to furnish the necessary capital to refine the crude product on a large scale, while others are reported to be anxious to buy the secret outright.

Thus it will be seen, an almost illimitable field is opened up for the production of inferior sweets indistinguishable from the wholesome and genuine article, except as our sense of taste may prefer the better and reject the poorer. Without the intervention of legislative action on the part of Congress, a sample of genuine cane sugar will become as rare in our grocery stores and on our breakfast tables as Guinea gold now is in the jewelers'. As regards the detection of the inferior or artificial article by chemical means, it is wholly impracticable, as every infallible means so far published requires an expert, and much experience and comparison to arrive at a correct and definite conclusion.

However, disguise their manufactured products as they may, and call them what they please, they are all much inferior to the genuine article they are intended to counterfeit. Dr. Robinson, it will be seen, admits his granulated glucose is only half as sweet as the cane product, and perhaps that estimate will be considerably discounted when all the facts are known.

In view of the various devices resorted to by unprincipled persons to counterfeit sugars, syrups, etc., it is a consolation to know that, instead of the outlook being dark and gloomy for bee-keepers, the reverse is true. Honey is steadily and surely becoming a greater favorite with the public, and where properly put up, and ordinary diligence is used in marketing it, ready sales can be made at remunerative prices, and speedy returns received; and finally, when pure cane sweets shall have been exiled from our markets, the enterprising bee-keeper will have a market at his door for what he can spare from the neighborhood demand, because there will still be consumers in abundance for natural sweets—and what can be sweeter than honey?

The Apiary Register.

We have now filled all the orders for the Apiary Register, after vexing delays in the Bindery, and hope all will be pleased with them. The following are some of the opinions of those who have received and examined them:

The Apiary Register is received, and, to my mind, it just fills the bill. I am sure that to all who wish to keep an accurate apiary record, it will be invaluable. On Nov. 24, I put in the cellar under lime cushions 56 colonies. They are in fine condition, so far.

A. J. Hatfield.

South Bend, Ind., Jan. 23, 1882.

I received the Apiary Register; am much pleased with it; it is just what every bee-keeper needs.

M. Sorrick.

Des Moines, Iowa, Jan. 24, 1882.

The Apiary Register is at hand and will supply a long-felt want. It will save a great deal of labor, as you can sit in your office and look over your Register, and plan out your work. You can see what colonies are likely to need attention, and will not have to trust to memory.

L. C. Whiting.

East Saginaw, Mich., Jan. 21, 1882.

Another Reform Needed.

"Hardly ever"—that is to say, very seldom, do we find in the "calls" issued for conventions, the name of the hall or place of meeting mentioned. It is but a short time ago that a bee-keeper who went to a certain town to attend a bee convention, became so exasperated at finding no notice of the place of meeting in the local papers, or anywhere else, in fact, that he telegraphed to the editor of the BEE JOURNAL at Chicago, thus: "Where is the Bee Convention?" We have had similar experience. We were sent for to attend a convention, and expected to find some one at the depot to inform us where to go, but found none. We then inquired of the station agent, at the nearest hotel, but could get no information of any bee convention. We then tried to find a bee-keeper who received his BEE JOURNAL at that post office, and were directed first this way, and then that way to find him. After spending half a day and paying over a dollar for hack fare, etc., we finally found that the bee man lived some miles out in the country. The Secretary had been derelict in duty—had made no arrangements for a hall, but finally one was obtained, and a *few* bee-keepers gathered in, and the result was a failure of realizing the object of the meeting.

These thoughts were drawn out by receiving a copy of the *Journal*, published in Berlin, Wis., dated Jan. 17, where the Northeastern Wisconsin Bee-Keepers' Convention was advertised to meet on the 17th and 18th of January. The following is what the Berlin *Journal* had to say about it, and will explain itself:

> A SWEET MEETING THAT DIDN'T OCCUR.—For several days past the following item has appeared in the *Journal*:
>
> The Northeastern Wisconsin Bee-Keepers' Convention will meet in Berlin, Jan. 17 and 18. A cordial invitation is extended to all who are interested in bee-culture.
>
> The above notice was sent us on a postal card which was postmarked Ripon, but read as follows:
>
> Berlin, Jan. 10, 1882.
>
> CHAS. STARKS—Dear Sir: Please insert the following notice in your paper this week if possible. (Then followed the notice.) Please arrange this as you like, but *stir* the bee-keepers up. C. H. GREEN.
>
> On Monday one or two of the Berlin bee men applied to us for information as to the Convention announced. We gave them all we knew about it as above stated. They were entirely ignorant of the matter, and Mr. Beckwith stated that the Convention at the last meeting was appointed at Packwaukee.
>
> To-day (Tuesday) was the day announced for the opening of the Convention. Several bee-keepers from the surrounding country have been in. They could find no convention and applied to the *Journal* for information. Our reporters could find no convention either, and the matter is a profound mystery.
>
> Since the above was written another bee-keeper, from Aurora, has called to inquire about the Convention, and says it has been advertised in the AMERICAN BEE JOURNAL, Chicago, for some weeks past.
>
> It is possible that the non-arrival of the train from the east this afternoon prevented the arrival of the head and front of the affair, although who the said "head and front" is does not appear.
>
> At all events the Convention that was to "bee" has not bee-n, and those who came to the city to attend, had their journey for naught.....
>
> Burnett Davenport, of Aurora, has had his trained bees in training for several days for the bee Convention which was to have taken place in Berlin to-day. Geo. Smith intended to bring up the question of Spavined Bees, from which he has suffered so severely, and also intended to exhibit his fine swarm, branded across the backs, "G. H. S.," and which he keeps blanketed. E. W. Daniels, of Auroraville, was going to discuss the proper way to lead bees out to water, while Mr. Beckwith, of this city, proposed giving his views of pulling of their shoes and turning them out to pasture, in the summer. Mr. A. Young, of Eureka, was to have exhibited some buff cochin bees of his own invention, and an unknown gentleman, from Waushara county, proposed introducing some bees whose business end had been treated with sand-paper to remove the stinging qualities. The treatment of bees while moulting, the profit in keeping farrow bees, and the teaching of Américan bees Italian, were subjects to be discussed. If the Convention fails to occur to-morrow, the bee-keepers of this section should administer a stinging rebuke to the instigator of the brand.

Hereafter, to prevent such exasperating experiences, let us have the name of the Hall or place of meeting, mentioned in the notice.

We know nothing of the circumstances connected with the "hitch" at Berlin, but it would be very proper for the Secretary to "arise and explain."

◆

☞ We understand that California is to have a Dollar bee paper. It is to be edited by Mr. N. Levering, published at Oakland, called *The California Apiculturist*, and the first number is promised next week. When received we will *notice* it further.

Glucose Tests.—We are frequently in receipt of inquiries for some reliable, simple method to detect the presence of glucose, and have experimented much with this object in view; but so far, we have been unable to find anything satisfactory and fully reliable, that would not require an expert chemist or microscopist to manipulate it. Green tea, alcohol, tincture of iron, and many other articles have been suggested, but none of these have we found infallible. Of course, unless the inquirer be a scientist, there will be no reason to suggest an analysis, and such an one is already familiar enough with chemistry to require no suggestions from us.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

A Warning Voice.—The Cincinnati *Grange Bulletin* gives its opinion of breeding the best queens, etc., and concludes with its warning to bee-keepers in the following language:

> It is strange to see so many bee-keepers' conventions and societies, for the good and mutual benefit to be derived from such meetings, in the interchange of thought and practical management of bees; and after all to find that prices for bees, queens, and even comb foundation are so low, that nearly all the special breeders now complain that they handle too much stock and goods for the little or no profit there is in the trade. Why this state of affairs? Surely the laborer is worthy of his hire, and should be paid for all time and trouble in furnishing a good and acceptable article for the market, let it be bees, queens, honey, or anything in the line of apiarian supplies. It is a well known fact to at least one-half of our best queen-breeders that every queen taken from a full colony of bees will retard it more in its progross and prosperity, than it would to take 25 pounds of honey from them; and yet, we say, how strange it is that bee-keepers do not establish a uniform price for all our supplies and live up to it. No wonder we hear so many complaints of poor queens and irregularly marked bees, from the queens

so abundantly furnished by these nucleus-hive queen breeders which as a rule give such poor satisfaction, for there is not more than one in every five of such queens worth the time and trouble of introducing them. We have tried and tested the queens thus raised to our full and entire satisfaction. It is this nucleus system which has both ruined the quality of queens and overthrown just and fair prices for good stock. Therefore, we raise a warning voice against all such frauds, no matter whether in queens thus raised, glucose, or any other dishonorable commodity produced by dishonest venders to deceive the unsuspecting.

◆

Sentiment and Bee-Keeping.—"Hail Columbia" in the *Western Agriculturist*, gives apiarists a bit of her experience, as follows:

"Of all the hobby folks that I ever saw, bee-keepers are the hobbiest. They all have new inventions, each one so much better than the last, and by the time that half of us get this last new thing, and get used to the hang of it, or the slide of it, or the lay of it, as the case may be, behold, it is old and out of date, rejected by all leading bee-keepers. Get the best, get the best, and we go flying from one invention to another with a rapidity distracting to sober-minded people.

When I first began bee-keeping I had the Langstroth hive, with a honey box the size of the hive, and matters seemed easy and simple enough; but that was too much box, it discouraged the bees, and those boxes were cut down to half size, and that lasted one season. Then came the one-pound frames, the prize box, and the section boxes, following each other in quick succession. When I took in honey to sell in small frames, the grocerymen wanted prize boxes; when the next month I took them the prize box, they wanted section boxes, and now I have the section boxes, but by next season there will be something new.

"These forty thousand bee-keepers won't let anything alone. As for me, I'm worn out. There seems to be no end to the rabbets and sections, and Cyprian queens. Italians! was the cry, and now when we all had them and had got used to their ways, they must hatch up a new kind of queen, fresh from the isle of Cyprus. Mr. C. was patient with me for several years, but when he saw there was no end to it, he declares he'll have to build another house to hold the bee fixings; he says it takes more clap-trap and bang-ups to run a hive than it does to run a sawmill. "Why," says he, "my father used to get more honey out of his old bee gums than you do with all your regalia."

"Then there is another side to bee-keeping that I never can get on—that is the sentimental side. It is the fashion for bee-keepers to say: 'I love my bees, I hate to sell them, I think they recognize me,' etc. I like my bees well enough when they behave themselves, but just as soon as one stings me I get mad, and every additional sting makes me madder and madder; repeating the ten commandments or the multiplication table don't prevent—the mad will come."

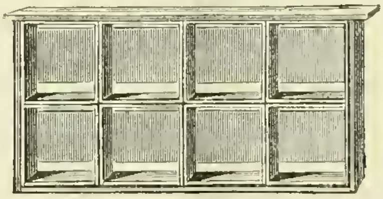
◆

What Hive to Use.—The Hon. L. Wallbridge, in the Canadian *Farmer*, gives the following advice concerning the hives to be used for comb and extracted honey:

This is the season of the year in which the bee-keeper should get ready his hives for next summer's campaign. To those who have not yet decided upon any particular hive, I would say, have only hives of one pattern in your apiary.

As to what the proportions of the hive should be depends very much upon the manner in which you intend to manage your bees, or rather in what way you desire your honey product to go to market. If you desire box honey or honey in sections, I do not know of a better hive than the Langstroth. As this hive left the hands of the inventor, its size was 18⅜ inches long, 14⅓ inches wide and 7⅞ inches deep, all inside measurements, and contained ten frames, cubic contents 2563 inches. Many use this hive with nine frames, 12½ inches wide, and are well satisfied with it. The contents cubic of this hive would be 2268 inches inside measurement. The Langstroth hive affords more honey surface, and the section frames will contain eight one pound sections each. This is a very convenient form in which to send honey in the comb to market.

A section 4¼x4¼, and two inches broad, will contain just one pound of honey. Much depends on neatness in commanding ready sales.



Case of 8 *sections*, 4¼ x 4¼ *inches, for Langstroth Hive.*

If, however, you intend to extract your honey, and market it in that way, you will find a hive of the following proportions very convenient, both as containing combs well proportioned for the extractors, and the hive itself easy to handle—16 inches long, 12½ inches wide, 12 inches deep, cubic contents 2400 inches. The frame adapted to this hive will be found to be nearly square, and very convenient in the extractor.

Many bee-keepers neglect to get their hives ready until swarming time commences. Such persons, instead of having the bees in one kind of hive (as I strongly recommend) will find at the end of the season their bees will be in boxes, kegs, barrels, and in all conceivable shaped things. You must give up this method, or quit bee-keeping.

Does it Pay?—Mr. George Grimm, in *Gleanings*, says it does. His report is as follows:

Though my report is not a very brilliant one, yet I am well satisfied with my season's work. About 200 per cent. net on the capital invested is not a bad gain. Last winter left me 392 colonies; but though my loss was less than 10 per cent., the remainder after the ordeal they had passed through, could not all be in good condition. The demand for bees was so great and so urgent, that almost before I knew it I had sold 248 of my best colonies. This left me but 144—and, of course, the poorest of the lot.

The season opened up with the best prospects for a honey crop, and I began to wish that I had back the good strong colonies that I had sold. Finding several parties not far distant, whom the past poor season and the trouble of last winter had entirely disgusted with the business, eager to sell out, I bought the weak, half-starved, and partly queenless remnant of the colonies at a bargain, and was enabled to face the new season with about 190 colonies; or, perhaps, I had better say, nuclei and colonies. Anticipating a good demand for bees next spring, and having a large number of hives and about 2000 combs on hand, I determined to increase as much as possible. I divided them up into five apiaries. At home I started some 80 small nuclei to rear queens. Myself with one assistant did all the work. Nov. 18th to 21st, my bees were put into cellars—610 colonies. Two were left outdoors. Nine-tenths were supplied with young queens during the season, and all have a good supply of honey. Oct. 1st I returned from a trip to northern Dakota. Not a cell of brood was to be found in any of the hives. What feeding I did was done after that time. The colonies are, as a rule, of medium strength, and present a good appearance. I believe they will winter well.

* * * * *

Does it pay? Well, I should say so! 200 *good* swarms can be bought for $1,400. In a poorer year than this, an average surplus of 50 to 100 lbs. per hive, and an increase of 50 per cent, would not be extraordinary. The increase would easily pay for expenses, and 10,000 to 20,000 lbs. honey at 20 cents would be better than 4 per cent on U. S. bonds. Or take my case this year; 190 *not* good colonies; increase, 422; prospective loss during next winter, 10 per cent, or 61 colonies (but I am certain 5 per cent to 8 per cent will be the limit), leaves a balance of 361 in spring at $7.00 per colony is $2,527, and honey $300, gives total gross gain, $2,827. My expenses were between $500 and $600; leaves balance of at least $2,227. If I estimate good colonies worth $7.00, my 190 were worth on an average not more than $5.00. It is not hard to do twice or three times as much with good colonies as with poor ones. I think we'll stick to the business a few years more, even though every winter should equal the last.

Jefferson, Wisconsin.

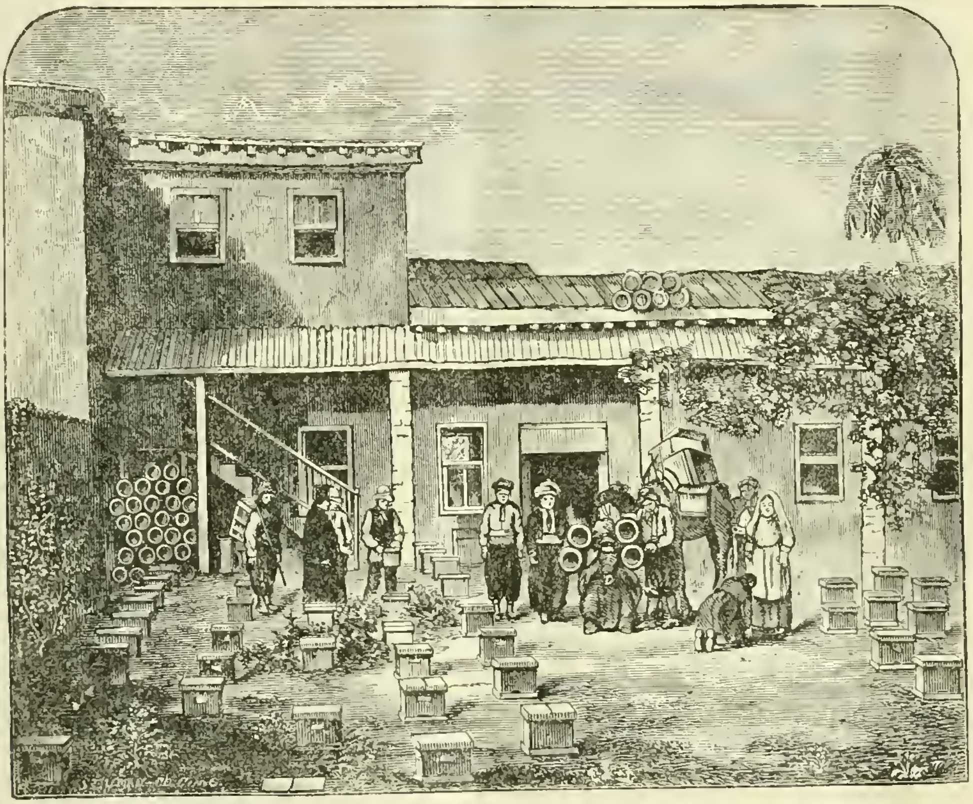
CORRESPONDENCE

Gleanings in Bee-Culture.

American Apiary in Cyprus.

FRANK BENTON.

The photograph, the best and largest that could be obtained here, shows only a small part of the apiary, whose foreground is cut off, and which extends some distance to the right, and a part of which is the large inclosure back of the house.



Frank Benton's Apiary, Larnaca, Island of Cyprus, Mediterranean Sea.

The costumes of Greeks, Arabs, and Turks, with the group of camels, give to the view a decidedly Oriental air. The camels have just arrived from the interior of the island, and the attendants are busy removing their loads of clay cylinders—the native bee-hives. A Turkish woman belonging to the caravan stands near.

In the group at the left is a priest of the Greek church, with a Greek citizen, and a Greek porter, the latter being about to start for the steamer landing, with a case of bees for shipment, while the two former are watching "*Amerikanos*" manipulate a hive of bees. "But, can they be handled thus with so many people and animals?" asks some one. Certainly they can, if one knows how to manage them, and has a bit of patience.

Most of the hives shown in the picture are plain boxes, of about 2000 cubic inches capacity; designed to hold medium-sized colonies for queen-rearing—all queens being reared in full colonies. The whole apiary is devoted to this branch of bee culture, and of course movable combs are used exclusively, the loose-fitting Langstroth being employed to the exclusion of all other styles. The size, however, is 9 inches deep by 10 long outside. Twelve of these are placed in one story, but sometimes twelve more are put into a second story, placed above the other. But even on four of these combs, a queen with plenty of young bees and a good supply of honey will winter here.

At the extreme left of the porch are some twenty clay cylinders piled up like drain-tiles. These are some of the bee-hives of the natives, and this shows exactly the manner in which their apiaries are arranged—is, in fact, a model of a Cyprus apiary. The cylinders are made of clay, and burnt, and each is about a yard long and 9 or 10 inches in diameter, except each end, which is a little larger. A stone disc is fitted into each end, and the crevices, except an entrance-hole, filled with puddled clay.

On the roof is another model (!) apiary, such as may be seen at many a Cypriote's home. The cylinders of this collection are made of clay, into which short straw has been incorporated, and they have been merely dried in the sun. Inside they are of about the same size as the others, but the walls are generally a little over twice as thick as those made of burnt clay, being quite two inches. Of course, they are very heavy, unwieldy things; yet (since there are few trees in Cyprus) these thick clay walls protect the combs from the sun even better than do the thinner burnt clay ones. In winter, too, they keep the bees warmer. The diameter of those cylinders is greater at the rear end than in front, in order to facilitate the removal of combs of honey; for from these, as well as from the other kind of hives, the natives take such an amount of honey as they think the bees can spare, by cutting the combs out from the back end, after the removal of the rear disc, and after the bees have been driven forward with smoke. But brood and some dirt often get mixed with the combs taken out, which are then crushed, and the honey strained out; hence the quality is very poor; yet 13 cents per pound (14 piastres per oke) is the price commonly asked for it in the bazaars. It often happens that the poor bees find their winter stores have been stolen from them, and that, after a hard year's toil in the hot, scorching hot, summer sun, they must starve in the cold. Surely, I hope there are no Cypriotes in America, and that all of the beautiful little workers I send over there will fare better than would have been the case if they had been left to the not very tender mercies of Greek or Turkish Cypriotes.

The house is one of those old rambling adobe and stone structures so characteristic of Cyprus. Its walls are two feet thick, floors of stone, and roofs of beaten clay six or eight inches thick, and supported by great arches of massive masonry. Some idea of its size may be gained from the following facts: The front court is 60 by 100 feet, and is nearly inclosed on three sides by parts of the house, which contains 14 rooms. The front porch is 12 feet wide and 65 feet long. A hall at the right leads through the house 50 feet to the back court, which is about 30 feet by something over 60, and is inclosed by the house on two sides.

When our little "prize queen," who first "piped" Sept. 5th, 1881, can trot from room to room, it will be a task to hunt her up in this old mansion—our home in Cyprus.

For the American Bee Journal.

Pure Bees—A Short Review.

G. W. DEMAREE.

The several articles over my signature, which have appeared in print from time to time, discussing the question of purity of the Italian race of bees, were penned for no other purpose than to call attention to what careful experiment has demonstrated to my entire satisfaction to be true, viz: that the Italian is not a pure blood race of bees. In discussing this and other subjects, I have thought it the square thing to give the name of the writer whose views I thought proper to controvert. I do not think it the fair thing to quote the language of a writer and proceed to wallop him soundly, without saying "I mean you?" and thus give him a fair chance to "arise and explain" if he chooses to do so. Viewed from this standpoint, my articles have not been so very controversial, and certainly have not taken the form of a "favorite plea," as Mr. Dadant says they have.

If I mistake not the reader will be able to discriminate between the main issue and the side issues that have been raised as the discussion progressed. In my paper read before the National Convention at Cincinnati, I took the ground that the imported Italian is not a pure blood race of bees. And in my attempt to prove the proposition I cited the fact that there are two so-called strains of the Italians, which fact makes it impossible that the race as a whole can be pure.

In due time Mr. Dadant and Mr. A. I. Root confronted me with the "three band test." If the reader will take the pains to scan the pages of the back volumes of the bee papers, and examine the standard works on bee-culture, he will see that the three band test and its twin brother—Huxley's doctrine of the "survival of the fittest," has been the rallying point of the venders of queens and bees. It would now seem that I have demolished the citadel of strength, by showing that the three bands do actually exist however obscurely, on the body of the hybrid or American cross, as well as on the hybrid imported from Italy.

In discussing this subject I have said that the progeny of some queens imported from Italy do not show the three bands. Of course I meant that the bands were not visible to common observation. If you are willing to accept of the fact that the Italian race is a cross between a yellow and one or more black races of bees, you will have no trouble to understand why that if you breed out the black blood by selection, the yellow will gain the ascendency as you progress, and the bands will become distinct and well defined. While on the other hand if you breed out the yellow blood, or let your stock run down by a preponderance of black blood, the bands will grow fainter and fainter, till artificial means must be resorted to if you would know they exist at all.

If I understand Mr. Doolittle (whose opinion I value highly) he corroborates these statements. Mr. Dadant's experience with his first Italian queen as related by him on page 22, BEE JOURNAL, Jan. 11, "gives him away" without lien or incumberance. According to his statement, that finely bred queen from Dr. Dzierzon contained sufficient yellow blood in her make-up to transmit the yellow bands to the progeny of her daughters mated with black drones. The statement further shows that these bees after being hybridized in this country contained more yellow blood than the three imported queens whose progeny were "darker even than the ill-mated queens."

Mr. Dadant now gives up the three band test and falls back on "good behavior," as a reliable test. I would gladly spare him this last "ditch" if the facts and sound philosphy would suffer me to do so. But I have had colonies of hybrids—a cross between a selected yellow queen but a black drone, that behaved precisely like the well bred Italians. While other colonies of a like cross would behave just like the black bees. This is no uncommon thing. It is precisely in accordance with the laws of transmission of traits from the parent to the offspring.

One single exception will destroy Mr. Dadant's new rule for test of purity. There is really no reliable test of purity, simply because the Italian is not a pure race. It is very kind in Mr. Heddon to come to the rescue of Mr. Dadant. His letters are always interesting, but he fails to help Mr. Dadant out of trouble. He does not touch the main question. He only gives his opinion, which though valuable is not conclusive. Others differ from Mr. Heddon's opinion.

In a late article Mr. Heddon intimates pretty strongly that the opinion of those who make "large reports" is more valuable than that of those who make small, or no reports at all. It seems to me that Mr. Heddon failed to look all around the subject before he wrote that. A good location abounding with bee forage is essentially necessary to a big report. If Mr. Heddon will set down one of his apiaries in the best portions of the blue grass region of Kentucky, where corn, hemp, wheat, oats and tobacco, cover the fields as far as the eye can see, and where the red clover grows too luxurious for the "bill" of any bee, and white clover struggles for existence at the side of the prince of grasses (Kentucky blue grass), and where the basswood has disappeared long ago, and eternal war is made on "woods" every where, he would begin to conclude at the end of one or two seasons' experience that his opinion is not very weighty judged by the rule he has laid down. In just such a closely cultivated country I have demonstrated that bees can be made to pay. The truth is, in a good location such as may be found in many parts of Kentucky, and such as Mr. Heddon is blessed with, any kind of bees will give good results without a very high order of skill on the part of the apiarist.

Christiansburg, Ky.

For the American Bee Journal.

Bee-Keeping for Ministers.

WM. F. CLARKE.

Ever since the appearance of Rev. O. Clute's report for 1881, in the AMERICAN BEE JOURNAL of Dec. 7, I have wanted to write a few lines on the above topic. It is a good showing, worthy the author of "The Blessed Bees." By the way, I hope that book paid. It richly deserved to be a financial success, whether it was or no. Every bee-keeper should read it. A romance at present, it bids fair, at no distant day to be a reality. Mr. Clute has gone far toward the realization of his own ideal, and I metaphorically pat his broad back, and congratulate him.

But—bee-keeping for ministers—that's my theme. One of the ablest of their class who ever lived, eked out an insufficient support by tent-making, and I don't see why modern ministers should not try their hands at bee-keeping.

The inadequate salaries of the great majority of ministers, is a great evil in many ways. Their helplessness and inaptitude in supplementing their scanty incomes, is a worse evil, because, in too many cases, their conscious dependence makes them timid, and fearful of the results of any departure from the beaten track of so-called orthodoxy. To be voted heretical, means beggary. "'Tis pity, but pity 'tis, 'tis true." Whether a minister gets a liberal or meagre salary, he should be free as air to declare whatever he conscientiously believes to be truth. Alas! poverty "makes cowards of us all"—or not to be too uncharitable—some of us. To be possessed of some resource, on which to fall back, would give ministers back-bone, and a sense of manly independence.

If bees persecuted all ministers as they do me, it might be questionable kindness for me to advise their going into apiculture. But there is something "peskey" about me, which I am charitable enough to think is not usual among my "reverend" brethren. And, as they are usually too much cloistered, take too little fresh air, and, like one of old, "cannot dig, and to beg are ashamed," as they ought to be, I recommend bee-keeping, as a light, pleasant employment (if you don't get stung too often), and eminently favorable to good health.

Let me tell a little story which, I think has never appeared in the BEE JOURNAL. A rural parish clergyman in England, one of the class of whom Goldsmith tells, as passing rich on forty pounds a year" received a diocesan visit from a newly-appointed bishop, who had been a former class-mate of his. The bishop expected to find his old friend in straitened circumstances, and was greatly surprised to find him surrounded by all the indications of comfort and competence. After a good dinner, served with some style, his lordship began to enquire into his friend's circumstances. "Married a rich wife?" "No, my lord," "Got a legacy?" "No, my lord," "What, then?" "My lord" was the reply, "I am a manufacturer, and employ a large number of operatives from whose labors I reap a good profit. If your lordship will step into the garden, I will show you the factory." So, he led him out-doors, and showed him a well-kept apiary. It made a great impression on the bishop, and whenever afterwards any of his clergy complained of poverty he was wont to say, "*Keep bees*! KEEP BEES!"

Listowel, Jan. 14, 1882.

For the American Bee Journal.

Keeping Bees on Stilts—No. 2.

BY W. G. PHELPS.

The curtain now arises on the scene of Mr. Hopeful's summer operations in bee-keeping. He had, you doubtless remember, previously procured 100 boxes *supposed* to contain bees, and after the few trifling incidents—narrated in my last article, had landed them on his ancestral estate. Now Mr. Hopeful had given the subject of apiculture much profound and searching thought. An unknown but considerate friend had kindly sent to his address a copy of the BEE JOURNAL. This paper after scanning its pages, our enterprising friend pronounced too matter-of-fact for him. He concluded he would not subscribe. He was positive that bees could be managed with far less of what he termed "tom-foolery" and with absolute certainty of heavier profit than the JOURNAL asserted. All the talk about half crops of honey for 1880 was just nonsense, or the result of mismanagement on the part of the bee men. If bees wouldn't gather honey, why just *manage* them so they would. What if the flowers didn't secrete honey, surely the bees could be made to "lick it up" around the stores and cider-mills, if rightly managed. Among Mr. Hopeful's bee purchases were quite a number of what are termed "lucky bees" upon which he particularly prided himself. It is possible that some of your readers may be resting in blissful ignorance of what constitutes a "lucky" stand of bees. Mr. Hopeful knew though, and informed me, and as I am in duty bound to give all the details of his interesting experiences, here it goes. It is a fact that bee-keepers are mortal, notwithstanding the other fact that some of them sing in sirenian strains, (Mrs. Lizzie Cotton for instance). They fail "to winter" well and are oft times affected with fatal "spring dwindling." In other words, they sometimes die. It therefore remains a solemn and very important duty, Mr. Hopeful says, for the nearest surviving relative to inform each colony of bees of their late owner's decease, accompanied with sundry knocks upon the side of said hive. After this ceremony is performed they become pre-eminently "lucky bees." Such bees could not fail to be profitable stock to operate. What cared Mr. Hopeful if some of these cononies did feel extremely light, were they not under the spell of their late owner's enchantment—and bound by the mystic power of the incantation? Pshaw! said Hopeful, science is no where after that. However, our Mr. Hopeful in truly scientific styles delighted to study the nature and watch the movements of his "pets." He would seat himself as he said in the "remotely immediate vicinity of his apiary," and while drinking in the spring-time fragrance of the opening bud, through the medium of his highly sensitive nasal organ, would likewise indulge in rose-colored visions of the prospective prosperity that was to attend his bee-keeping operations when, well—when his bees came in. Such, almost daily, were the meditations of our esteemed friend. One day after indulging a more than wonted flight of fancy, he caught one of the little insects and holding it dexterously between two straws, proceeded to descant upon some of the anatomical features prominent in its formation, in the hearing of the wondering Mrs. Hopeful. "Observe (says he) these delicate *antitlers* with which the beautiful creature, prognosticates as it searcheth for its ambrosial sweets."

And oh, observe! says he, the seraph like formation of its incomparable "*throatax!*" "Did you ever behold aught like it?" "Notice also my dear, the matchless symmetry of its posterior parts." (Here Mr. Hopeful brought the object of his observations close up under his eye-glasses). "Mark the beauty of that unrivalled encasment, the loveliness of that artistic color, but most wonderful of all, behold the perfection of that polished shaft which, ever and anon"— here unfortunately for future observation and remark, the beautiful bee unexpectedly escaped from its captor's grasp, and taking a true "bee-line," came immediately in contact with the prominent nasal appendage, the property of our esteemed friend. Hereupon, it gave a practical demonstration of the adaptability of the "polished shaft" for business, by inserting it well into that integument of said organ. "Ouch!" shrieked the investigating Mr. Hopeful, "Dear me!" piped dear Mrs. Hopeful, while she followed the retreating figure of her liege lord into the house. As he nervously rubbed the tomato leaves upon the punctured part and fumbled distractedly for the salts, was it simply the sighing of the wild wind among the leaves of the luxuriant trees, or was it the melodious cheering voice of sweet Mrs. Hopeful simply remarking, "bee stings you know you told me dearie were excellent for *rheumatiz*."

Galena, Md., Nov. 3, 1881.

For the American Bee Journal.

Is the Problem of Wintering Settled?

JAMES HEDDON.

From reading the able article of Mr. F. Della Torre, on page 387, I must say that I believe he may be nearer the facts in the case than any other man that has ever written upon the subject.

Is it possible that bacteria and pollen are both the causes of bee dysentery? It seems so. If Mr. Della Torre is correct, it is so.

Mr. Dadant thinks that bacteria is the cause. I once thought so. Then I thought pollen was independent of bacteria, that is, I saw signs that said "eating pollen did this." I did not think to see if the pollen was bacterious or fermenting.*

In our late State Convention, Mr. Harrington, of Medina, Ohio, stated that a weed (vulgarly called "tremble weed") growing about his locality produced bacterious or fermenting honey, that when bees stored it to any extent, death by dysentery was sure to result. Bees working upon this "tremble weed" and upon cider mills, are truly "bacteria-laden bees." Where else they may get bacterious honey we know not. Honey is so full of floating pollen, that bees succeed in rearing brood with that, and no other. Perhaps that pollen may ferment and produce dysentery. Again, it may be that bee-bread may ferment, owing to the kind of pollen it is made from, or from the kind or amount of honey and water that is used in its composition, or both.

If all the above points were unfavorable, it may be that the bee-bread fermented in my 47 hives in my large dry cellar, in 1869, even though they had plenty of upward ventilation; while in Mr. Balch's damp cellar, 35 miles away, where his hives had no upward ventilation, and the combs came out moldy and wet, and the bees strong and heathy, they either had no accessible bee-bread, as for some reason it did not ferment, or the bees did not eat it.

Yet, it may be that Mr. Della Torre

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* All fermentation (the first stages of decomposition) is bacterious. These bacterious germs have been considered by many as animal (myself among the number), but Prof. Cook who is excellent authority, considers them vegetable. I now have no doubt that he is correct; however, as regards the wintering problem, it makes no difference, as they are a living growth, in either case, dependent upon the air currents or assistance from higher forms of life for their transportation.

is incorrect in his reasoning (having had no experience with dysentery except what he purchased), and that my first convictions were correct, viz: that older bees, when by adverse circumstances are induced to eat any pollen during confinement, will have dysentery as the result. Those whom I have looked up to as authority have taught that bee-bread was essentially a larval food. We know that the food that young babes, calves, and colts live on exclusively would, if used to the same extent by the adults of their species, produce dysentery and death.

This illustrates why pollen may be "ever ready to produce life" at one time and under certain conditions, while at other times it kills. The dinner that strengthens you to-day may kill you if duplicated one week hence, under other conditions.

I have but little doubt but that moisture is a great aggravator or producer of bad effects from its favorable influence toward the production of bacteria. Whether chaff, cellars, houses with stoves in them, hives lined with lime cushions, will prevent this fermentation when the pollen and honey are most unfavorable within themselves, we cannot yet reasonably decide; but I, for one, have fears as to the practical and ready means of prevention, just as soon as we get a clear understanding of the cause, and causes of the cause. I believe we are coming at it, slowly but surely. I believe that my first conception of the cause will turn out to be true. Some other form of life is working for the ascendancy over the life of our bees.

If it would not be asking too much of Prof. Cook, I would ask him in behalf of the science-loving apiarists of the world to give us through these columns as elaborate an account of the late French experiments with that low form of life so destructive to stock, as his valuable time will afford. When relating the experiments in our State Convention, we felt a tingling sensation run over the brain, and thought surely these scientists are the saviors of men.

Dowagiac, Mich.

For the American Bee Journal.

Those Fine Bees in Canada.

W. P. HENDERSON.

The American Bee Journal, of the 11th inst. reached me the 12th inst., and in looking over it I find from the pen of W. F. Clarke, the following: "We have organized a company in this town, and started an apiary as a tentative business venture. * * * * Thus far we have only bought 44 hives of bees, being the sum total of that nice little apiary at Kincardine, with which I fell so desperately in love last July."

In looking at his communication in No. 29, July 20th, which I noticed at the time, that Mr. Clarke, visited "an excellent Canadian apiary," and found, as he says, "a uniform, nicely marked, even-tempered lot of Italian bees." * * * * "We opened some 20 hives to inspect the queens. In several cases we had no need for a puff of smoke, so quiet were the bees."

Now, if Mr. Clarke's company intend to rear queens for sale in Canada, I know of no better stock than the Sturgeon stock to rear from. There are many queens, however, of the same stock in different apiaries of the Dominion.

But the funny part to me, Mr. Editor, in the different articles of Mr. Clarke, published in the Bee Journal and elsewhere, is his recollection of all those islands in Canada, covered with nothing but bees, and his remembering all those Syrian, Cyprian, Parry Sound, *Apis dorsata* and *Apis Canadensis*, hard names, but failing to remember that of little Tennessee, or the name of that little Tennesseean who furnished Mr. Sturgeon with those fine queens.

When the tentative Canadian queen apiary *advertises*, I will, with pleasure, extend the right hand of welcome to them upon the platform for public patronage, with a wish that *Apis Americana* the coming bee, may be produced in a much shorter period than many are predicting.

Murfreesboro, Tenn., Jan. 12, 1882.

For the American Bee Journal.

Exact Reports of Honey Crop.

E. L. B.

I have before me a report of a honey crop from a very honest man, of a very superior strain of bees, resulting from a hybrid cross, which gathered just 40 lbs. of honey per colony, from red clover, when ordinary Italians did not get one pound. These bees understood themselves, and put in just that convenient multiple of pounds, that would not puzzle the brain of buyer or seller. Five colonies equals 200 lbs.; 10 colonies equals 400 lbs. How convenient? Then again, three swarms from one old colony, last summer. These together make four colonies, all in splendid order for winter, except they have about 15 lbs. of honey per colony too much, for wintering. Four times 15 lbs., are 60 lbs. It is so easy to count the surplus inside the hive! Then these four united give just 400 lbs. of white comb honey, and exactly 300 lbs. of dark comb honey; all nearly built in two pound sections. Just 175 lbs. to the hive; 87½ sections per colony—22 sections per month, in box honey; besides the extra 15 lbs. inside of brood-chamber—just two pounds per working day (these bees don't work on Sunday) all summer, wet or dry, cold or hot, blossoms or no blossoms; besides filling the brood chamber.

There was one colony that far excelled these. It stored just 400 lbs. It didn't go into fractions at all. Just 400 lbs., 200 boxes or sections; 50 sections per month—a whole crate and four sections over, every 15 days.

Brothers of the bee-keeping fraternity, "That coming bee have ariv in another State," and the breeder has written a letter announcing this to an apiarist of Michigan.

Wilton, Iowa.

For the American Bee Journal.

Foul Brood and its Cure.

A. R. KOHNKE.

As some bee-keepers may be led to believe, by Mr. Townley's assertion, that he cured foul broody colonies, by simply putting them into a clean hive, that they also may succeed by the same proceedure, I wish to say that I consider such a thing impossible.

Foul brood means bacteria of putrifaction which do not only pervade brood but also honey, pollen, and the body of the old living bees. A patient having small-pox cannot be cured by moving him into another house, not by starving him. Wherever he is taken he carries the contagion with him, in his body, until he is cured. It is the same with bees. If Mr. Townley's bees got well after being removed to other quarters, it would simply prove that there was no contagious disease about. Mr. Townley admits of having had no faith in nor success with that method and resorted to cremation, also substantially admitting what he seems to deny, viz: that he cannot tell whether or not he has eradicated the disease, for when it takes a bee-keeper three years of repeatedly burning his infected bees, hives, and all, at a loss of $200, he may rest assured, that by that method he has not yet burnt his last hive and colony, which are as liable to catch the contagion as those before them which were burned before the last ones showed signs of the disease.

Youngstown, O., Jan., 1882.

For the American Bee Journal.

Foundation for Sections.

H. C. FARWELL.

In Mr. Doolittle's article on page 6 of the Bee Journal for this year, I was sorry to see that the Given foundation, made on the Given press, should be left out of his test. The great trouble with the thin foundation for sections is that it does not contain scarcely any wax in the wall. It is plain enough that foundation as thin as 10 square feet to the pound cannot contain much wax in the wall. You would not think of putting such foundation in the brood-chamber because there is not enough wax in the wall to much more than give the cell a fair start. Then why put it in the sections? The reason is that all the heavy foundation made on the roller mills has so thick a base or septum that the bees leave the so-called "fish bone" in the center of the comb.

This difficulty has been overcome by the Given press. The great pressure brought to bear on the sheets of wax makes the septum exceedingly thin and at the same time making a heavy wall. The septum of this foundation is as thin in that which measures 6 square feet to the pound, as in that which measures 10 square feet to the pound, if properly made, and fully as thin if not thinner than natural comb. Mr. Doolittle says:

"At a time when honey is coming in moderately, say when a good colony is bringing in from 3 to 5 lbs. per day of extracted honey, comb foundation is a success in the surplus arrangement. but at a time when honey comes in with a rush, the same colony gathering from 12 to 20 pounds per day, it does not pay the cost, for my bees will fill a box having a starter of natural comb, and finish it as quickly as they will one full of foundation by its side."

I can see no way to account for this statement only in this way, that when the bees brought in only 3 to 5 lbs. of extracted honey per day they could supply the amount needed to complete the full length of the cell; but when they brought in 12 to 20 lbs. of extracted honey per day they had to secrete from 2 to 4 times as much as those bringing in 3 to 5 lbs. per day. Thus putting those which brought in from 12 to 20 lbs. of extracted honey almost on a footing with the bees which had simply a starter.

Now if this wax had been supplied in the wall of the foundation the bees would not have had to furnish it, and I think Mr. Doolittle would have had to give a decided preference in favor of the sections filled with sheets of foundation. Mr. D. may say that some of the foundation was heavy, measuring 6 square feet to the pound, so it was, but his test shows that the septum of the same was very thick, and had their extra wax been in the wall, instead of the septum, it would have been just what we want. If we would have foundation a perfect success in the sections we must have a heavy wall and thin septum; such we have in the Given foundation. If we are going to furnish wax for the bees to build comb with let us furnish it, and not give them thin foundation with one-third or one-half enough wax, and making them furnish the rest.

Dorset, Vt.

For the American Bee Journal.

The Effect of Bee Stings.

T. C. MACE.

I stated in the BEE JOURNAL a short time ago the fact that the sting of the honey bee affects me dangerously; seeing Wm. F. Clarke's experience in the last number of Weekly BEE JOURNAL, I will give mine.

Soon after being stung (it matters not on what part) I feel the effects in my eyes, ears, lips, nostrils and throat, particularly the latter, and generally more or less all over my body; swelling begins to progress at a fearful rate; breathing through my nostrils soon becomes impossible and breathing at all becomes very difficult, so much so at times that I am nearly suffocated for want of breath.

On two occasions during the past season, my tongue swelled so that I could scarcely speak so as to be understood.

A few years ago some doctors advised me to try drinking spirits. I did so and still use it for that purpose. I imagine that it does good as the sooner I take it after being stung the more mild the effect of the sting seems to be, and during the swelling a swallow of spirits seems to slightly relieve the difficulty of breathing, for a few minutes, but sometimes it is almost impossible to swallow the spirits or anything else.

I have some faith in "inoculation" notwithstanding the fact that the more I am inoculated the worse the effect. If it were not that each sting is fraught with danger, I would try the experiment in about this way: After being stung I would take spirits after the effect of the sting had considerably passed off (but not entirely), and while the system was somewhat under the influence of the spirits I would be stung again, then take more spirits and after the effect of the sting had sufficiently passed off another sting, and so on indefinitely until the sting had little or no effect, taking just spirits enough to neutralize the poison to a considerable extent, but not entirely. As soon as the indications justify (if they should justify) diminish the amount of spirits taken, but continue the stinging for sometime after the spirits has left the system. The experiment might result thus, or it might not. If it should, I have an idea the system would be effectually inoculated.

I should be encouraged to try the experiment by the fact that some years ago. after the effect of a sting had passed off sufficiently to render it possible for me to get among the bees again, I immediately received another sting which seemed to affect me but little, if any; but my wife and father-in-law think it would be too much like suicide for me to try it. I wish, however, that some one else would. If Mr. Clarke does not seem to think the sting really dangerous, will he try it? Now, please don't plead temperance, for I am a temperance man (except on occasion of bee stings). We have heard and read of well authenticated cases (both accidental and experimental), of the human system being effectually inoculated so as to become venom proof. I have seen such accounts in the BEE JOURNAL. I formerly knew a man in an adjoining county who told me that the sting of the honey bee effected him very painfully, but on one occasion (on cutting a bee tree I believe) he was so severely stung by several bees that he had to be carried home by his companions; since which he has been venom proof.

Cameron, Mo., Jan. 16, 1882.

For the American Bee Journal.

Is this all Fiction?

L. W. VANKIRK.

I must have a chat with Mr. Doolittle, and I guess the best way will be to run over to his ranch. *Wie gates*, Mr. D.? I see you are busy. Yes, very; last winter was hard on my little pets; I will have to do a great deal of doubling up. Why do you have to do this? Well, it will take me some time to tell. You know I use a small hive. Last season I united, and stimulated my colonies until the queens had every comb filled with brood, so when the harvest came they were forced to store all their honey in the surplus chamber. I obtained a good crop, but the season closed sooner than I expected, and I found my colonies scarce of honey and full of bees. After I had weighed my surplus, I fed back all that was not salable, and not having enough of this, I drew largely on the sugar barrel. Well, didn't you get them in good shape for winter in this way? No; somehow, the queens wouldn't do any good laying, there being such a horde of old bees on hand, etc. After a great deal of fussing, I was forced to let them go into winter quarters, and my cellar was too cold for them, the thermometer ranging from 30° to 35° all winter, and that temperature is far more destructive to bees than a higher or lower temperature. What temperature should a cellar be kept? About 46°, but it is a good plan to give them a gradual cooling off once or twice a month. I agree with you there, but your bees have wintered badly; how will you be able to hand in your big report this fall? Well, I'm going to unite and get the number just as small as possible (I won't count those nuclei over there), and feed liberally to get the queens to lay, and by the time the honey season comes, I will have lots of queens on hand, and I can divide up and have all those empty combs occupied by the time the season is in full blast. You see it will be easy to get a good average, and that is all I care for. By the way, stranger, how many bees do you keep and how are they doing? Well, I went into winter quarters with 96, including a few that were united, and came out with 87. Well, stranger, were they good and strong? No, sir; they resembled yours in some respects; they had plenty of honey and few bees. Well, did you double up? No; I had sixty-odd that didn't need anything; the balance had their honey uncapped from time to time, but I didn't get all strong enough till the honey season had come. What did you do then? Why, the strong ones were swarming by this time, and I used up about 20 or 30 swarms strengthening these weak ones and stocking my nuclei.

How many have you now, stranger, and what were your profits from them last season? I have 90 colonies, and my profits were about $800.00. How about your outlays? Twenty dollars will cover all, including 7 bee papers. Do you give the bees all your time? No, sir; bee-keeping is a "sort of side issue" with me. I do a hand's work on the farm most of the time, and let "the girls" preside over the apiary. Why don't you give it your whole time? I would, if I could get any one else to take the same interest in the other work that I do. I can get along pretty well by taking a day now and then, and making good use of my "spare moments." I have made bee-keeping pay in this way for 8 years, and have not lost as many, or half as many, in all this time, as you did last winter. But my time may be coming. How is it; is this all fiction?

Washington, Pa., Jan. 18, 1882.

SELECTIONS FROM OUR LETTER BOX

Unfortunate.—I subscribed for the BEE JOURNAL the beginning of the year, and I think I began the year well. I am 65 years old, and have had bees 4 years. I began with 2 colonies; 1 died, the other sent out three swarms. One took to the woods, which left me 3 to winter. They came out all right in the spring and increased to 15, which gave me 256 pounds of honey, and I sold it at 25c. per pound, netting me $64. This was all in box honey. In the winter of 1880–81 they all died, and left lots of honey, some of which I sold. Last June I bought 1 colony in an observatory hive. Last spring I sent to H. A. Burch, South Haven, Mich., for 6 colonies of Italian bees. They were to be delivered the 1st of May, but no bees came; I wrote a number of times, and he said he would send them as soon as he reached my order, and he kept promising from time to time, but neither sent the bees nor refunded the money. At last I brought suit against him for money or bees, and he sent the bees in poor condition the latter part of September, with hardly anything to keep them through winter. I have had to feed them ever since. I cannot tell whether they will pull through or not. I bought 12 colonies of black bees this fall; they are all in good condition. I am going to Italianize them.

S. T. WOOLWORTH.

Gratiot, Wis., Jan. 24, 1882.

Bees in Kentucky.—I am glad to acknowledge that I am a more enthusiastic apiarist since my attendance of the National Society, at Lexington, Ky., and believe my success in the past can be greatly excelled during coming season. We all hail with delight the improved appearance and increasing value of our favorite, the BEE JOURNAL, and hope its Editor and staff may be blessed with the great prosperity ever due to industry and true merit. Bees are wintering well in Kentucky and the prospect for 1882 is flattering when we consider the mild winter, hives stored with the greatest abundance of rich stores to induce early breeding; then we have had a copious rainfall for 3 months past which will bring us a profusion of early blossoms and rich verdure of clover and grasses for our little pets to revel in. JOHN T. CONNLEY.

Walnut Lick, Ky., Jan. 20, 1882.

Honey Pop-Corn Balls.—Allow me to thank Mrs. A. M. Sanders for her recipe for making honey pop-corn balls. We have tried it and think they are very nice. Bees are wintering well, so far, in this vicinity. I have 45 colonies; 25 in cellar and 20 on the summer stands, packed in chaff. Being in attendance at the Michigan State Bee-Keepers' Convention, I say you are right in regard to the glucose question. J. T. SMITH.

Bellevue, Mich., Jan. 23, 1882.

Bee-Culture in D. C.—There is not much intelligent acquaintance with bees in the D. C. and parts adjacent, and I do not know what can be done to create a proper interest. Maryland and Virginia ought both to be great bee States, and I hope soon will be. Washington City, I believe will, in the near future, beat the world for its honey flow, for its flora, and especially for basswood and white clover it will, as a city, be unequaled. The tide-water regions of both States ought to be admirable for honey, but it is almost entirely neglected. I am going to see what I can do through the clergy. If we can interest them, they can soon interest their people. I have now 42 colonies, which I hope will winter safely—all hybrids and Italians. I hope to do well next year. I read the Weekly BEE JOURNAL right through. J. A. BUCK.

Washington, D. C., Jan. 23, 1882.

Kentucky Bee-Keeping.—There are not a great many who have bees near me; at least those who have bees have but few colonies; scarcely any within 3 miles of this point, have more than 10 or 12 colonies. I began the winter with 40 colonies in Langstroth hives, mostly Italians, and as far as I know, they are all alive. Some of them were weak in the fall, but I have fed considerable, as the weather was favorable. We had rather a poor honey season last year on account of the severe drouth, but a very favorable winter so far, the weather being so open that they have had several flights. We have not had much severe cold weather, and little snow, but plenty of rain and mud. As far as my observation has extended, the bees seem to be consuming but little of their winter stores, rather less, I think, than usual. Success to the BEE JOURNAL.

J. F. ELLIS.

Fiskburg, Ky., Jan. 26, 1882.

Artificial Comb Honey.—Do people in large cities buy and use our beautiful section honey, and at the same time think they are using or eating artificial comb honey? I am frequently told by well-informed men that section honey is manufactured in Chicago, and none but experts could tell it from our natural section honey, except by its flavor. One man told me, in traveling through New York State he saw wagon loads of full comb shipped from the factory. I told him it was perhaps near Canajoharie, and was foundation filled in frames ready for the bees; but he insisted it was full-size comb, and added that in New York city they manufactured large quantities of section honey, and that it sold 2 cents higher, per lb., than natural honey, and yet did not contain a drop of honey. I have so far always denied the possibility of any such honey in sections. If the questions are worthy of any notice, please give us light. A few words in explanation: A friend of mine tells me that he has frequently eaten artificial section honey at his sister's table, in Chicago, that could not be told, until cut, when it would show plainly from the absence of the natural cells. Question—Could a sheet of wax be made resembling capped honey, fastened into a section, the section filled with glucose of the proper consistency, and then the other side sealed up with a similar sheet of wax? I say no; but these are well-informed men.

H. S. HACKMAN.

Peru, Ill., Jan. 19, 1882.

[We have expressed the opinion that the manufacture of artificial comb honey was not only impracticable, but utterly impossible. However, we have a series of investigations under way, as stated last week, to ascertain how the impression originated, and will give publicity to the result when fully learned. Undoubtedly, the whole story has originated from a mistaken impression, probably from the use of too thick foundation in the sections, or some one not thoroughly familiar with apiculture, has seen some bee-keeper using combs which were built the previous season and saved over for spring or summer use, then a fertile brain has suggested that they were artificially filled with glucose and capped over. Once imagining how it might be done, it is easy to give out the impression that it was so done, and a story or prejudice never loses by traveling. Persons in large cities might buy artificial comb honey, even though they knew it to be such; but they would prefer the genuine. We know they buy sugars and syrups, and yet no one is so ignorant as not to know that the majority of the latter is glucosed. Some are even so demoralized that they buy butterine, knowing it to be such, and the reason assigned is "it looks as well as most of the butter."—ED.]

Bee-Culture in Tennessee.—I read the BEE JOURNAL with a great deal of interest and profit. I would be more interested if you had more correspondence from Tennessee and the South. I would like to see our people more interested in the production of honey. From your correspondents in the north, and northwest, you seem to labor under many more difficulties incident to your rigorous winters, than we do in the south. It is a rare circumstance that our bees perish from cold, and we never winter in houses or cellars, or pits, but on their summer stands. Your reports, however, indicate that your annual yield, per hive, is greater than ours. Perhaps it is owing to your superior care, manipulation and skill. It seems to me, that, taking everything into consideration, the south must be a better location for an apiarist than the north; when we take into the account the rigorous winters of the north, involving so much loss, so much care and labor. We would like to see some of your enterprising bee-keepers in this country. In my opinion, a lucrative field awaits such here. We have had an exceedingly mild winter so far, and our bees are in prime condition. They are now gathering pollen from the American arba vitæ. I see that Wm. F. Clarke, in his article, in your last issue, "goes for" Mr. Doolittle for using "we" when speaking of himself. Will you allow me to ask Mr. Clarke to say, in his next, whether it is in good taste for Doctors and Divines, when writing for bee papers, or advertising bee productions, to sign themselves Rev.—— Dr.——? If so, would it be in good taste for a general to sign himself Gen.—— or a lawyer to sign himself Lawyer——?

JOHN FOX.

Columbia, Tenn., Jan. 16, 1882.

Keep the Ball Rolling.—I see that Mr. G. W. Thompson has made the motion for a Bee-Keepers' Society, in New Jersey (see BEE JOURNAL Dec. 7), and it has been seconded by Mr. Chas. H. Rue (see JOURNAL Jan. 3). Now, Mr. Editor, it only remains for you to put the question, and in doing so, be sure to record my vote in the affirmative. Let some one arrange for the meeting to organize and circulate the notice, and New Jersey will no longer be counted out of Bee-ing; but will take her stand with other progressive bee-keeping States.

J. H. B. COOK.

Caldwell, N. J., Jan. 16, 1882.

California Prospects.—It would please many of us California bee-keepers to attend the National Conventions, but the distance intervenes depriving us of that pleasure, and this is the penalty we pay for living in the land which may truly be said to "flow with milk and honey," although there are years here when the flow of honey is very light; but the flow of milk continues, and such was the case last year. Judging from present appearances, the prospect for 1882 is not very encouraging, although this is something which is beyond human wisdom, to say what the future will bring, especially in the way of honey. But this I can say, that even when there is a deficiency in the honey crop here, the mortality of the bees need not necessarily follow. All of our good honey is produced in the mountains or foot hills, but there are seasons, when from different causes there is no secretion of nectar in the mountain plants, consequently, the bees can gather no honey; but they can be saved by moving them to the valleys where there is a succession of bloom, especially on lands that are irrigated, and on such lands you can grow whatever you wish to plant, enabling their owners to sow feed for them any time of year. Rape and mustard will bloom the year round. There are also in these low lands hundreds of acres of different varieties of the willow, which blooms from December until May. The eucalyptus, acacia, and pepper tree have been extensively planted here, and they afford both honey and pollen. I could enumerate many other honey plants which we could cultivate for the bees, but my letter is already too long. You will ask, "Why, then, does not California have a surplus of honey every year?" It is because the Californian has had his palate so pampered with good mountain honey that he cannot descend to eat strong, mixed, valley honey, which is much darker, and of a very inferior quality. I heartily approve of the action of the National Convention in choosing Wm. Muth-Rasmussen as their Vice President for California. I think the mantle could not well have fallen on more worthy shoulders.

J. E. PLEASANTS.

Anaheim, Cal., Jan. 13, 1882.

A Missing Bee Man.—In the spring of 1874, Abraham Krider, who claimed to be from Bucyrus, O., was dividing and transferring bees in our section of country. He introduced a new hive, which was simply a square box with cross-sticks and slats one-inch square, and one-inch apart, on top of the hives, to give the bees free access to the honey apartment. His mode of dividing was as follows: Drum one-half of the bees with the queen out of the "gum," put them in the new hive, which he put in the place of the old gum, removing the latter to one side to rear a new queen or die. In transferring, he removed all of the bees, and saved all the combs and honey. In the spring of 1875, I was employed by Mr. Krider to furnish conveyance and tools for manufacturing hives. In the following November we went to Kosciusko and Wabash counties, taking orders for dividing and transferring bees the following spring. Our orders amounted to nearly $1,000. Mr. Krider, who was about 32 years old, 6 feet tall, weight 180 lbs., wore a mustache generally blacked, and spoke the German language naturally, suddenly disappeared. He was a great cigar smoker, and had a craving appetite for strong drink. A postal giving his whereabouts since that date, will be thankfully received. Being left in a dilemma, I then employed Mr. I. R. Good to assist me, since which time he has devoted his time to the business of bee-keeping and queen-rearing, and has been quite successful.

AMOS P. BLOSSER.

Goshen, Ind., Jan. 18, 1882.

Can it Be?—I think I have made a discovery, without the means to demonstrate it, *i. e.*, that the worker-bee has an opening in the pollen baskets on the posterier legs, through which moisture can escape to hold the pollen in place in the baskets. I obtained this impression last spring when feeding rye-meal. The bees would buzz over it for a few moments, then I could see pellets in the basket, and they would not touch the meal, only stir it with their wings, while others would get in the meal and wallow like pigs. I have no microscope to test the matter, and request the scientific readers of the BEE JOURNAL to investigate the subject. Among other things which convince me this is so, I have seen bees laden with pollen come from the fields, on some the pollen was comparatively dry, and on others, apparently from the same source, it was so wet that it would almost drop off. Will some of the scientists give their opinions? Bees are apparently doing well. They had a good flight on the 28th of December.

ABE HOKE.

Union City, Ind., Jan. 23, 1882.

Persimmon Bloom for Honey.—Bees done poorly here last season. I went through the winter with 36 colonies, but had no swarms, and only about 300 lbs. of honey. Bees seem to be wintering well now. I wish to say to those who are planting trees for honey, that the persimmon is one of the best. It comes in bloom about the same time that linden does, and bees work upon it in a perfect swarm. What kind of seed can I scatter upon a tract of land that was once heavily timbered, but is now cleared, and used as commons, generally as a cattle range? It is a heavy clay soil; water stands upon it in winter, but dries off in summer, making fine pasture. There are still logs and stumps on it. It would produce fine crops if cleared. Is the Emerson Binder the same kind that has the spring-steel back, and is used for music?

JOHN H. CHRISTIE.

Dyersburg, Tenn., Jan. 17, 1882.

[Sweet clover is the best you can plant, as it requires no cultivation after being once covered; a light harrowing will be sufficient to cover it, and it will hold its own against everything else. The Emerson Binder has cloth back, and no still springs. It is much cheaper and quite as durable as the music binders.—ED].

Labeling Tin Cans of Honey.—I have found out what is the reason labels (no matter what kind of paste is used) will not stick to tin. There is a thin film of grease on all new tin ware, which must be removed, washing the place where the label goes on with a solution of caustic soda or potash, and drying with a cloth will obviate the difficulty, and common flour paste will then stick.

H. K. BEECHAM.

Acme, Mich., Jan. 25, 1882.

A Peculiar Case.—I have a colony of bees in my honey house, up stairs, with entrance on the outside, so they can fly at leisure. We use the room 3 times a week for band purposes. There are 15 members, and of course, we make quite a noise with 13 horns and 2 drums; the result is, the bees are about ½ or ⅔ dead, and they have eaten 25 or 30 lbs. of honey since Nov. 10. I think from the smell, on opening the hive, they have dysentery. Well what I started to say is this, on examination, the 21st inst., I find drones in all stages, from eggs to flying drones, no worker larvæ in the hive. The mother hatched June 10, 1881. She was as prolific as any queen I had up to the time of putting away for winter. She is a well-marked Italian queen, but her progeny is rather dark, but pure, if three-banded

is pure. Did you ever hear of a queen laying drone-eggs only in winter. I have had bees quite a while, and this beats me, what do you think about it? J. F. KIGHT.
Poseyville, Ind., Jan. 23, 1882.

[We think you have no queen in the hive now; if there is one, she has been reared since the fall set in, and has not been mated. It often happens that queens become what are called drone-layers, but not a young, properly-mated, prolific queen.—ED.]

From a "four-year-old" Apiarist.—Permit me to say your JOURNAL for 1882 "just fills the bill," is both magazine and paper, is weekly but not weak, and is just the shape to bind for future use. For two years I leaned on the capacious breast of Novice, but after leaving the infantile stage of bee-culture, I naturally struck to the more solid food in the BEE JOURNAL. I am only four years old yet (in the sweet industry), but I read your JOURNAL with great pleasure. I have a *vacation* every week from my pastoral cares when I get hold of that.
D. D. MARSH.
Georgetown, Mass., Jan. 17, 1882.

Terribly Severe.—Yesterday we had the worst day of the season. The mercury was below zero, with the wind blowing a perfect gale from the northwest, and the air was filled with whirling snow. It has cleared off now, but the mercury stands at 26 degrees below zero, while I write. This is the coldest that we have had in Borodino since I have kept bees. At such times as this, I can but think bees are far better off in a cellar of even temperature, standing at 45 degrees, or above.
G. M. DOOLITTLE.
Borodino, N. Y., Jan. 24, 1882.

Bees Have Devoured Little Honey.—Bees, so far, have wintered well, with but little consumption of honey, considering the mild weather and the many flights they have had.
JOHN C. PEDEN.
Lawrenceburgh, Ky., Jan., 25, 1882.

Feed the Bees.—Look at your bees the first warm day, and if they have not sufficient honey, at once get some coffee A sugar and take 4 measures of sugar and 1 of water (hot), put it on the stove and cook about 3 minutes, and feed the bees. If you have no feeder, make one; if your cushions are wet dry them; if you take no bee paper send for the BEE JOURNAL for 3 months at least, it may save you a colony of bees. G. N. PHARES.
Kempton, Ind., Jan. 26, 1882.

The First Blood.—On Jan. 7 and 15, 1882, my bees were bringing in pollen and honey from mustard, which was sown in September last. Continuous rain for thirteen days past, except those named, when the sun shone out near noon. A. B. McLAVY.
Bastrop, Tex., Jan. 16, 1882.

Ants in the Apiary.—In answer to Mr. Beath's inquiry I would say: Sprinkle the salt wherever the ants are; which is generally on the honey-board and under the edges of the cap. As it is not offensive to bees, it may be put on the bottom-board or anywhere about the hive.
J. L. WOLCOTT.
Bloomington, Ill., Jan. 24, 1882.

Bees Doing Well.—My bees are wintering finely, so far; even the small two-frame nuclei are doing splendidly. They are all in the cellar, with thermomter at 50° most of the time.
D. G. WEBSTER
Blaine, Ill., Jan. 27, 1882.

Dreadful, Whew!—It is 20° below zero here. I think some of my bees must be dead, or else I have a tough lot. I dare not look at them till the weather is warmer. The JOURNAL now ought to suit everybody, with the improvement on last year's style. Somehow, I think the first number, for 1882, was the best I have seen for a year. I like the idea of putting all the advertisements at the back end, they appear more at home then.
H. ALLEY.
Wenham, Mass., Jan. 25, 1882.

CONVENTION
NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Feb. 8, 9—N. E. O. & N. W. Pa., at Jamestown. Pa.
W. D. Howells, Sec., Ashtabula, Ohio.

9—Northeastern Maine, at Dexter, Maine.

April 11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May ——Champlain Valley, at Bristol, Vt.
T. Brookins, Sec.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

◆

☞ The Northeastern Bee-Keepers' Association of Maine, will hold its second annual meeting at Grange Hall, Dexter, Me., Feb. 9, 1882. An invitation is extended to all persons interested in bees and honey, to attend, and bring their pet bee hives, smokers, extractors, etc., that we may compare the merits of each different kind. The President will give an address, and we shall hear the Secretary's report, and elect officers for the ensuing year. WM. HOYT, Sec.

◆

☞ The Texas State Bee-Keepers' Convention will be held at McKinney, Texas, on Tuesday, April 25, 1882.

N. W. Illinois and S. W. Wisconsin.

The Sixth Annual Meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association, was held at Freeport, on Jan. 17, 18. There was a pretty good attendance, and a very interesting time. Several new members were admitted, and many questions discussed; one being the best means of discriminating information that is to be obtained from the experience of different persons in the way of handling and caring for bees, and procuring the best results.

Mr. Pratt, of Dixon, gave quite graphic descriptions upon several questions which were very interesting. The objects of these Associations is to help and be helped by the experience of practical men, and we had men there with us who are doing the best to make bee-keeping a success that they can, and are willing to tell of their mistakes and failures as well as to tell of their success. You may rest assured that when such persons assemble together in Convention it makes an interesting meeting.

The Association has 98 members. The attendance was small considering the membership, there only being at any one time during the meeting 42 members, but what were there seemed to be enthusiastic. The following persons were chosen as officers for the year 1882 or until their successors are elected; R. M. Milliken, President; Levi Keister, Vice President; Phares Kleckner, Treasurer; Jonathan Stewart, Secretary. The number of colonies of bees represented was 845 that were prepared for winter; all of them were reported to be doing nicely, having plenty of good honey, and they will no doubt come out all right in the spring in good condition to gather the best of sweets for the owner and those who love honey—not *glucose*.

The next meeting will be held in Rock City, on May 16, 1882. The next Annual Meeting will be held on the third Tuesday in January 1883, at Freeport, Illinois. J. STEWART, *Sec.*

◆

☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.
G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

◆

Change of Time.—So as not to conflict with other meetings, the time of holding the Bee-Keepers' Convention at Jamestown, Pa., has been changed from Feb. 1st and 2d, to Feb. 8th and 9th. This promises to be one of the most interesting meetings yet held. A good programme has been made out, and all interested in bee-keeping will find it to their advantage to attend.
M. E. MASON, *Pres.*
W. D. HOWELLS, *Sec*

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

THE AMERICAN
BEE JOURNAL

RATES FOR ADVERTISING.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance:

For **4** weeks		**10**	per cent. discount.	
" **8**	"	**20**	"	"
" **13**	"	(3 months) **30**	"	"
" **26**	"	(6 months) **40**	"	"
" **39**	"	(9 months) **50**	"	"
" **52**	"	(1 year) **60**	"	"

Discount, for **1** year, in the Monthly alone, **25** per cent., payable in advance.

Discount, for **1** year, in the Semi-Monthly alone, **40** per cent., payable in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

Transient Advertisements payable in advance. —Yearly Contracts payable quarterly, in advance.

THOMAS G. NEWMAN,
974 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

◆

The Apiary Register devotes 2 pages to each colony, ruled and printed, and is so arranged that a single glance will give a complete history of the colony.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

When you have got an old horse that has passed the market period, apply a bottle of Kendall's Spavin Cure and the result will be marvelous. Read advertisement. 5w4t

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Jan. 30, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The market has an upward tendency, and I am now paying the following prices in cash: Light comb honey, in single comb sections, 17@21 cents; in larger boxes 2c. less. Extracted, 8@10c.

BEESWAX—Prime quality, 18@22c.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

I pay 8@11c. for extracted honey on arrival, and 16@18c., for choice comb honey.

BEESWAX.—18@22c., on arrival. I have paid 25c. per lb. for choice lots. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb, in 1 to 1½ lb. sections, 20@22c.; same in 2 to 3 lb. boxes, 17@20c.; dark and mixed, in 1 to 3 lb. boxes, 12½@15c. Extracted, white, 10@11c.; dark, 9c.

R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—Buyers are more inclined to operate, but sellers are less anxious. A lot of dark extracted was seeking a buyer a few weeks ago at 8c., but has since been withdrawn, and now for the same lot 8c. is bid.

We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8¾@10c.; dark and candied, 7@8c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

NEW YORK.

HONEY—There is a liberal supply of honey here for which trade is very little demand, and prices rule weak and irregular.

We quote as follows: White comb, in small boxes, 18@19c; dark, in small boxes, 12@14c. Extracted, white, 10@11c.; dark, 7@9c.

BEESWAX.—Prime quality, 21@23c.

THORN & CO., 11 and 13 Devoe avenue.

ST. LOUIS.

HONEY—Plentiful and slow for all save choice bright comb—this sold readily; comb at 18@23c.; strained and extracted 9@11c. to 12½c.—top rates for choice bright in prime packages.

BEESWAX—Steady at 20c. for prime.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—The market since Jan. 1st has revived considerably; best No. 1 white, in 1 and 2 lb. sections, now sells at 20c@22c.; buckwheat dull at 17@18c. Extracted, in small packages, 12c.; in half bbls., 11c.

BEESWAX—22@25c., and very scarce.

A. C. KENDEL, 115 Ontario Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

◆

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

CLUBBING LIST FOR 1882.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal,	$2 00	
and Gleanings in Bee-Culture (A. I. Root)	3 00	2 75
Bee-Keepers' Magazine (A. J. King)	3 00	2 60
Bee-Keepers' Instructor (W. Thomas)	2 50	2 35
The 4 above-named papers	4 50	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00	2 80
Bee-Keepers' Guide (A. G. Hill)	2 50	2 35
Kansas Bee-Keeper	2 60	2 40
The 7 above-named papers	6 30	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25	3 00
Bees and Honey, (T. G. Newman)	2 40	2 25
Binder for Weekly, 1881	2 85	2 75
Binder for Weekly for 1882	2 75	2 50

HEADQUARTERS IN THE SOUTH
For the manufacture of
BEE-KEEPERS' SUPPLIES.
Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
5mtf **PAUL L. VIALLON**, Bayou Goula, La.

PURE HOLY-LAND QUEENS.
I make a specialty of rearing pure Holy Land Queens, and have now more than 100 colonies in their purity. All Queens bred from D. A. Jones' Imported Queens. Dollar Queens, before June 20, $1.25 each; after that date, single Queen, $1.00; 6 for $5.00; 12 or more, 75 cents each: Warranted Queens, 25 cents more each. Tested Queens, $2.50 each; Italian Queens, same price.
I. R. GOOD,
5wly Nappanee, Elkhart Conty, Ind.

1882.--QUEENS--1882.
I am now booking orders.
Warranted Italian Queens $1.00, six for $5.00; Tested do., after June, $1.50. Cyprians, Unwarranted, $1.00, six for $5.00. Send for circular giving description and recommendation from Postmaster and county officers. Money order office, Versailles, Ky.
J. T. WILSON,
1mtf Mortonsville, Woodford Co., Ky.

C. Olm's Comb Foundation Machine.
☞ Send for Sample and Circular.
18mtf **C. OLM**, Fond du Lac, Wis.

Muth's Honey Extractor,
Square Glass Honey Jars, Tin Buckets,
Langstroth Bee Hives, Honey Sections, etc.,
Apply to **C. F. MUTH,**
976 and 978 Central Ave., **CINCINNATI, O.**
☞ Send 10c. for Practical Hints to Bee-Keepers.
1wly

Wood Separators for Box Honey
ARE WARMER,
Better, Lighter, and Cheaper than Tin.
We now have machinery to furnish any size and thickness desired. Standard size (1-12 of an inch thick) gives the bees a wider and better entrance to the Boxes. Our experience has been extensive, and we find them far preferable to any other kind in use.
They pay even in appearance of the honey if you do not wish to glass it. Standard size for 5x5 boxes, 60 cents per 100. Special prices on large orders. Samples furnished for 5 cents, to pay postage and packing. Address,
C. R. ISHAM, Peoria, Wyoming Co., N. Y. or C. J. VAN EATEN, York, Liv. Co., N. Y.
5w1t

1882-Southern Headquarters.-1882
For Early Italian and Cyprian Queens;
Imported and Home-bred; Nuclei and Full Colonies. For quality and purity, my stock of bees cannot be excelled. I make a specialty of manufacturing the Dunham Foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Catalogue, giving directions for introducing queens, and remarks on the New Races of Bees. Address,
DR. J. P. H. BROWN,
5smtf Augusta, Ga.

GREGORY'S
SEED
CATALOGUE.

Thirty-six Varieties of Cabbage; 26 of Corn, 28 of Cucumber, 41 of Melon, 33 of Peas, 28 of Beans, 17 of Squash, 23 of Beet and 40 of Tomato, with other varieties in proportion; a large portion of which were grown on my five seed farms, will be found in my **Vegetable and Flower Seed Catalogue for 1882**, sent FREE to all who apply. Customers of last season need not write for it. All seed sold from my establishment warranted to be both fresh and true to name, so far, that should it prove otherwise, I will refill the order gratis. The **original introducer of Early Ohio** and **Burbank Potatoes, Marblehead Early Corn**, the **Hubbard Squash, Marblehead Cabbage, Phinney's Melon**, and a score of other new Vegetables. I invite the patronage of the public. New Vegetables a specialty.

James J. H. Gregory, Marblehead, Mass.
49m5t

SOUTHERN CALIFORNIA!

All about Resources, Climate, etc.

What can be done here, what it costs to come, routes, when and where to go.
The great Agricultural and Horticultural Paper of the Pacific coast,

Semi-Tropic California,

AN ILLUSTRATED MONTHLY.

Subscription price east of the Rocky Mountains, $1.00. Sample copy to any address for three three-cent stamps. FREE

Address,
CHAS. COLEMAN, JR.,
LOS ANGELES, CAL.
☞ Mention this paper. 49m4tx

READ THIS.

FIFTY YEARS AN APIARIST.

We are the oldest breeders of Italian bees and manufacturers of apiarian supplies in New England. Our experience dates back to the first experiments of Mr. Langstroth in the movable comb system. Send for our price list of bees, queens and supplies, before making your purchases for 1882. Address, **WM. W. CARY & SON,**
1mtf Coleraine, Franklin Co., Mass.

Quinby's New Bee-Keeping.

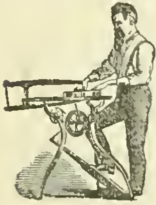
QUINBY'S
NEW
BEE-KEEPING
BY MAIL
$1.50

If you desire the benefit of an experience which has enabled us to secure 32,809 lbs. of honey from 160 colonies of bees during the present season, send for our book. It contains 270 pages, with 100 illustrations, and is fully up to the times. Price, by mail, **$1.50.** We sell everything used in advanced bee-culture. Send for our illustrated circular.

L. C. ROOT & BRO.,
46smtf MOHAWK, NEW YORK.

BARNES' PATENT

Foot Power Machinery



CIRCULAR and

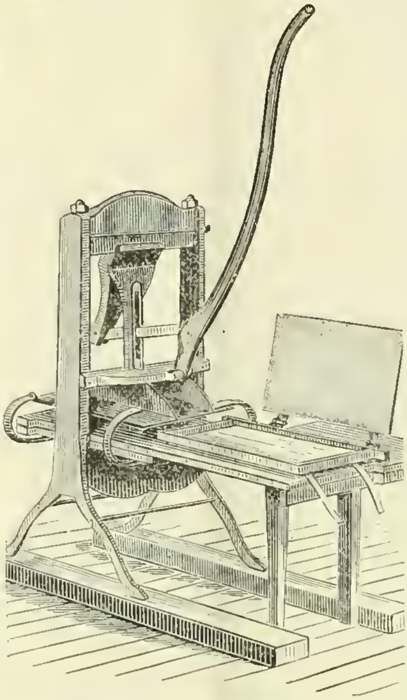
SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48 page Illustrated Catalogue.

W. F. & JOHN BARNES,
Rockford, Winnebago Co., Ill.

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. *Sells at Sight*, Double your money Address Dr. Chase's Printing House, Ann Arbor, Mich
36m1yp

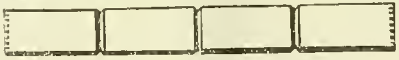
Given's Foundation Press.



The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1wly **D. S. GIVEN & C.,** Hoopeston, Ill.

Langstroth Hives & Sections.



Lewis' Improved One-Piece Section.

Objection has been made for the last two years, by Heddon and others, to the One-Piece Section, on account of the sharp corners made by the side-insets, and by others to the tendency of the bees to make the combs narrower at the insets. Our attention was called to these objections by receiving large orders for sections without the side-insets (one party ordering 30,000). We have now decided to manufacture them like the above cut, without side-insets. This improvement also enables us to make them at a lower price, as there is less labor on them. **Price, $4.50 per 1,000 on orders not less than 500. No charge for crating. No Patent on this Section.**

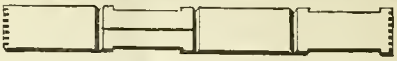
Send for new Price List, now ready.

G. B. LEWIS,
January 1, 1882. [1mtf] **Watertown, Wis.**

WANTED **AGENTS** to take orders for the best selling book on **FARM** and **HOME** topics ever published. Sells at sight. Ladies can handle it. Has no superior in any language; 1,050 pages, with nearly 2,000 Illustrations. Terms free on application. **50 Per Cent. to Agents**

F. L. HORTON & CO., Pub'rs,
4w5tx **Indianapolis, Ind.**

HIVES AND SECTIONS.



We are in better shape than ever to furnish Bee Hives and Sections, having remodeled our machinery, and put everything in tip-top order for the coming season. We make a specialty of our

"BOSS" ONE-PIECE SECTION.

We have not sold any rights to manufacture, therefore we are the sole manufacturers in the United States. Send for Price List.

JAS. FORNCROOK & CO.
Watertown, Wis., Dec., 1881.

NOTICE—Some persons having infringed upon our Patent "One-Piece Section," we hereby give notice, that we shall prosecute all manufacturers. We shall not molest bee-keepers for USING those purchased before Dec. 1st, 1881, but hereby caution them against buying any except those bearing our stamp. It has been reported by some that it is our intention only to prosecute bee-keepers for using those One-Piece Sections heretofore purchased; this is wholly untrue and false.

JAS. FORNCROOK & CO.
Watertown, Wis., Dec. 15, 1881. 51smtf

See! See! See!

The Bee-Keepers' Exchange.

This journal begins its fourth year in a new dress, has been increased in size to 32 pages, is a live, progressive monthly, edited by practical bee-keepers, and is richly worth the subscription price, which is $1.00 per annum, postpaid, or three months on trial for 25 cents. Sample copy free. Our price list of Apiarian Supplies is now ready, and you will consult your best interests by securing a copy before you order. Address,

HOUCK & PEET,
1mtf **Canajoharie, N. Y.**

G. M. DOOLITTLE SAYS:

Stanley's Vandervort Foundation

for sections is **"even thinner than natural comb, and is the very best foundation made."** See BEE JOURNAL of Jan. 3, and *Gleanings* for Jan., pages 14, 15. We also make high-walled Vandervort foundation for brood chamber to fit any size frame. Send for samples and prices, or send $10 for 20 lbs. 10 sq. ft. per lb., to
38m4t G. W. STANLEY & BRO., Wyoming, N. Y.

THE KANSAS BEE-KEEPER,

Devoted entirely to the best interests of those who keep bees. The question department, conducted by Dr. Wm. R. Howard, is of especial interest to beginners in bee-culture. Jas. Heddon will write a practical article for every number for 1882; 20 pages handsomely gotten up in book form. Every number worth the price of a year's subscription. Sample copies and premium list free to any address. Agents wanted. Address,

SCOVELL & ANDERSON,
28wtf Columbus, Kansas.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of

Monthly Gleanings in Bee-Culture,

with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Artificial Comb, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address on a postal card, *written plainly*, to

A. I. ROOT, Medina, Ohio.

Seeds

We have advantages as **seedsmen** of which we wish to tell the public. Thirty years experience as **PRACTICAL MARKET GARDENERS AND FLORISTS,** gives us such knowledge as to enable us to judge not only what are the best kinds for **Fruit, Flower or Vegetable** crops (whether for Private or Commercial Gardening), but also to thoroughly test the quality of all **Seeds** and **Plants.** Our **Greenhouses** and **Frames** in Jersey City, are the **largest in America,** covering upwards of four acres, solid in glass, employing an average of seventy men throughout the year.

PETER HENDERSON & CO.

35 Cortlandt Street, New York.

☞ We send our Illustrated Catalogue of **"Everything for the Garden,"** on application.

FREE

Plants

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,

1wly Hamilton, Hancock Co. Ill.

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen	$4.50
2-frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1..	2.50
" " per half doz., after July 1	13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,

1wtf Burlington, Iowa.

BEES for SALE.

I have for sale about **300 Colonies** of the

Celebrated Arkansas Brown Bees,

which I will dispose of in lots of TEN COLONIES OR MORE at very reasonable prices. They are in ten-frame Langstroth and box hives. These bees are said to be large, remarkably amiable, good section workers, and excellent comb builders. Owing to the mildness of the Arkansas winter, they will be very strong in bees, and spring dwindling will be avoided. These bees can be delivered on board steamer, near Memphis, before the middle of March, and before the early honey flow and swarming commences. Write soon for bargains, as I will close out both my Southern Apiaries by March 15th, or remove them North.

I am also booking orders for Italian Queens, Nuclei and Colonies, to be supplied from Chicago in June. Address,

ALFRED H. NEWMAN,

972 West Madison St., **CHICAGO, ILL.**

Bees and Queens

FULL COLONIES of ITALIAN BEES,

From my Apiaries.

QUEENS and NUCLEI IN SEASON.

☞ Satisfaction guaranteed. Circular on application. **J. H. ROBERTSON,**

50wtf Pewamo, Ionia Co., Mich.

J. V. CALDWELL,

CAMBRIDGE, ILL.,

Wants every reader of the good old AMERICAN BEE JOURNAL to send his name and Postoffice address for a copy of his new Illustrated Circular of Bee-Keepers' Supplies. It may pay you to read it before ordering your supplies.

☞ Beeswax wanted. 3w26t

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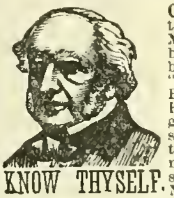

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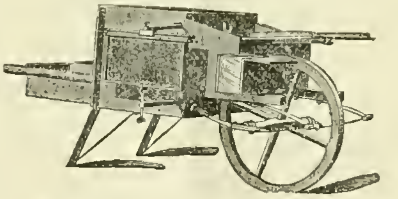

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—:o:—

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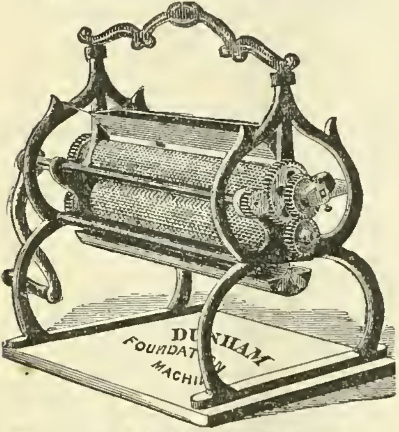

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TOPICS PRESENTED THIS WEEK.

Editorial—

The Northeastern Convention.................. 81
Artificial Comb Honey.......................... 82
Honey as Food and Medicine.................. 82
Items...82, 93

Correspondence—

Producing Comb Honey—No. 1.................. 83
Yellow or Leather-Colored Bees............... 83
Honest and Kind Criticism...................... 84

Convention Notes—

Northeastern New York Convention........ 84
  Suggestions about Conventions.......... 84
  Improvement of the American Italians 85
  Bees do not Puncture Fruit............... 85
  The American Bee Journal................ 86
  The Best Mothod of Rearing Queens... 86
  Are Bees a Nuisance?...................... 87
  Wiatering Bees.............................. 87
  The National Convention.................. 88
  Co-Operation................................. 89
  The National Convention Denounced.. 89
  Uniform Section Adopted.................. 90
  A Seal Adopted.............................. 90
  Miscellaneous................................ 91
Local Convention Directory.................. 91

Selections from Our Letter Box—

Building Straight Combs...................... 91
Fall and Spring Record........................ 91
Cotton Frauds.................................. 91
Advice—Without Reasons...................... 91
Report for 1881................................ 93
Using Old Combs............................... 92
Bees Require Care.............................. 92
A Correction.................................... 92
From Northern Pennsylvania.................. 92
The Melne....................................... 92
Recipe for Sticking Labels on Tin Pails.... 92
Under-Sized Frames............................ 92
Blizzards! Whew!.............................. 92
Biogham's Bees................................. 92
Report for 1881................................ 92

Special Notices—

To Advertisers.................................. 93
The Apiary Register............................ 93
New Publications............................... 93
Binders for Bee Journal........................ 93
Clubbing Rates.................................. 93

The Northeastern Convention.

Much of the space of this week's BEE JOURNAL is devoted to the proceedings of the Northeastern Convention, of New York, to the exclusion of considerable matter in other departments. We give the report of the Convention in its entirety, as published in the Utica daily papers, sent us by the Secretary, and have inserted all of the essays upon which discussions were reported. Others will be published as we can give them space.

It is hardly necessary for us to say that we deplore the action of the Convention in allowing itself to be drawn into a belligerent attitude toward, and unkind criticism of, the National Society (see page 88). Being a "life member" (not an officer) of the latter, and an "honorary member" of the former, we *feel* somewhat compromised by the action taken at Utica. We were not present when the "essay" referred to was read and the vote taken, at Lexington, and knew nothing of either till we saw the report of the proceedings—though it might easily be construed that we were, by reading the published report. We were unwell after arriving at the Convention, on the evening of the second day, and several times had to leave the Hall for a short time to get fresh air, and such might have occurred on one of these occasions. In justice, we should not be held the least responsible for anything done in our absence—which we neither indorsed, opposed, nor even heard read—as was *our* case with *all* the matters complained of.

The criticisms of Mr. House on the National Convention are:

1. Its manner of electing its officers by instructing the Secretary to cast the ballot of the Convention for those reported by the nominating committee. Of this we disapprove, but we do not believe any injustice was ever done—it being an expedient to save time, there being no other nominations.

2. That its sessions should be held at the East, West, North and South, but that "during the past few years there is seemingly little or no regard paid to custom and privileges." Well, let us see. In 1877 and 1878, it was held in New York—that was the only time in its history when sessions were held in the same place two successive years! The year previous it was held in Philadelphia; all in the East. In 1879 it was held in Chicago (call that West); in 1880 in Cincinnati, and in 1881 in Lexington—both towards the South. It is certainly in vain to try to find any cause for complaint in this.

We suggested that the session of 1881 should be held in New York, but a New Yorker present responded that New York had not asked for it; we suggested Atlanta, Ga., but was met by the same objection. If New York wants it, let her send an invitation to the next meeting.

3. Its indorsement of Mr. Langstroth is called by Mr. House a "farce"—an "injustice"—"unjust discrimination"—a "stain upon its record, never to be blotted out"—"and enough to make the very blood chill."

To say that such epithets are foolish, ridiculous and unjustifiable, is putting it exceedingly mild.

The gentlemen who so unanimously voted to indorse the sentiments, as the views of the Convention, evidently intended only to show their appreciation of the labors of Mr. Langstroth, without the least disparagement to the late lamented Quinby, Wagner, Weiss, etc. It is, we feel certain, exceedingly unjust to attribute any other motive to them.

The National Convention was a very harmonious body, and we are fully persuaded never thought of being thus stretched upon a "rack" of torture.

On page 86, it will be seen that a malcontent sent a letter to the Utica Convention "making complaint that the AMERICAN BEE JOURNAL continually misquotes and endeavors to weaken the honey market." Having spared neither time nor money in our endeavors to *develop* the honey market, and just as honey is being made a staple article commanding a cash price at our very doors, to have such a *foolish* complant entertained by the Convention and a "committee appointed to investigate the matter and report next year"—is supremely ridiculous!

The same individual sent his complaints to us with a threatening letter, a few weeks ago—intimating that a new bee paper would be started to "take the place of the BEE JOURNAL," etc.,—to which we replied in full, and added:

> "As you think best to impugn my motives and use threatening language hostile to me and the JOURNAL—please let this close the correspondence. I have no time to attend to such, nor relish for it. I have done the best I could to get up a good Bee Paper, and shall continue to do so, regardless of consequences. You or anyone else have the same privilege, without consulting me or my interests."

As we own the BEE JOURNAL and have to take the full responsibility of its prosperity or adversity, we don't see what any individual or Convention has to do or say concerning its management. We cheerfully receive "suggestions" from anyone, but cannot submit to any *dictation*. If the BEE JOURNAL does not suit bee-keepers they are under no obligation to take it. This is a *free* country, and there are seven or eight bee papers, and he must be hard indeed to please who can find none to suit him.

Let bee-keepers try to cultivate generous feelings towards one another—encourage brotherly love, and practice charity—then they will neither find time, occasion, nor inclination to pick a quarrel with their fellow laborers. This is to be deplored every where, but no where more than among bee-keepers.

Conventions conducted in the interests of the pursuit of bee-keeping will ever receive the cordial attention and support of honey producers —but if such are to be *prostituted* to a display of personal animosities, and the jealousies of the discontented—then it is far better to never more hold a Convention—the pursuit, now being on a firm basis, will prosper, and honey become popular with the masses, even though there be no concerted action among bee-keepers. The pursuit will be "wounded in the house of its friends"—but it will *not* be destroyed. Its professed friends will alone be the losers.

Artificial Comb Honey.

Much has been said about the manufacture and sale of artificial comb honey, and so numerous and apparently well authenticated have been some of the rumors regarding its accomplishment, that many thoughtless persons have accepted it as a fixed fact. One story even goes so far as to advance the price of such bogus stuff two cents per pound above the genuine article, in the Eastern retail markets.

We have been unable to surmise how the hoax originated, and after much inquiry and investigation have come to attribute its start to the same cause as that assigned by Prof. Cook, on page 85 of this number—a joke. A. R. Kohnke, on page 93, this issue, referring to this matter, says that after the comb is built out by the bees, the bee-keeper may fill it with anything he pleases, and seal it himself, too. He adds:

> "The *modus operandi* I have known for several years, but, considering there is enough cheating and adulteration going on, as it is, I deem it not advisable to give vent to this invention"....

In a matter like this, or any other, we think the real fact, fully and plainly told, is most beneficial. The method referred to, we presume, is that exhibited at a German Bee-Keepers' Convention, where an ingenious member present sealed over a comb of honey by a process of spraying on hot wax; but the work was slow and tedious, and instead of suppressing the fact as prejudicial to the bee-keeping public, the affair was given publicity as a triumph of patience and skill. Notwithstanding our abiding faith in the ingenuity of humanity at this day, we do not believe it possible to artificially seal honey combs at a cost to compete with the labor of the bees; nor do we believe it practicable to fill the combs with anything, by hand or mechanical means, and then depend upon the bees to complete the work profitably and satisfactorily. And as to the making of artificial combs, with cells built out to natural length, and in close imitation of the wonderful work of nature's little drudges, *it has not been done.* The genius who shall accomplish this may next turn his attention to the discovery of a perpetual motion, or prepare his crucible for the transformation of the baser metals into gold.

Honey as Food and Medicine.

We have just issued a new edition of our pamphlet bearing the above title. It has been revised and enlarged from 24 pages to 32, the new pages being devoted to *new* Recipes for Honey Medicines, as well as all kinds of cooking in which honey is used.

It is undeniable that *pure honey* is the simplest, the healthiest, the most natural, and the most strengthening article of food for healthy persons, as well as the best remedy for the sick; and for the convalescent it is the true balsam of life, to restore them to their wonted strength and health.

What is needed is to educate the community up to this idea, and in no way can that be done so well as by directing their attention to the merits of honey.

This little pamphlet should be scattered by thousands all over the country, by honey producers. In this way it will *create* a home market in almost any locality.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

When 100 or more copies are wanted, they will be sent by express, at the expense of the purchaser.

☞ The present seems to be an unusually mild winter all over the world. An English correspondent, at Derby, writes on the 12th of December, "I have plenty of sunflowers in bloom in the garden, and primroses. Some of my daisies are in bud. The season is a remarkably open one." During January they had a "cold wave," as did nearly the whole Northern World. Still on the whole the winter has been a delightful one in America as well as in Europe.

CORRESPONDENCE

For the American Bee Journal.

Producing Comb Honey—No. 1.

G. M. DOOLITTLE.

By referring to the Weekly BEE JOURNAL for Dec. 7th, I find that notice was then given that Doolittle "will write a series of articles during 1882 on the production, care and sale of comb honey." Upon looking the field all over, I believe I can please the readers of the BEE JOURNAL no better than by telling them first what I do in my own bee-yard, and how I do it, thus writing from a practical standpoint rather than trying to theorize, by telling you what might be done. In order to write understandingly, I will take up the text under the different heads: Production, Care and Sale, separately, and give my mode of treating each one.

First, then, we have production: In order to produce good results in comb honey the first requisite is plenty of bees when the honey harvest arrives, for whatever else we may have, success cannot be obtained without plenty of bees. Again, as I said before, these bees must be on hand in time for the honey harvest, else they become merely consumers instead of producers. How often we find men keeping bees on this (consuming) plan, getting nothing from them in the line of surplus honey, unless it is some little buckwheat honey, or that gathered from fall flowers, which is generally of inferior quality, for the reason that they do not have anything but colonies weak in bees at the time the harvest of white honey occurs. Such bee-keeping does not pay, and for this reason I have dwelt thus long on this part to enable all to see that, of all others, this is the most important item in the production of comb honey.

Our first step, then, is to produce plenty of bees in time for the honey harvest. With most of us white clover is the main honey producing plant, which blooms about June 15th to 20th, and by June 25th is at the best; hence, our bees must be in readiness at that time if we wish to succeed. From practical experience I find that it takes about 6 weeks to build up an ordinary colony in the spring, to where they are ready to produce honey to the best advantage; so I commence to stimulate brood-rearing about the first of May. I have tried many plans of feeding, both in the open air and in the hive, to stimulate brood-rearing, but finally gave them all up for the following: When I have decided it is time to commence active operations for the season I go to each colony and look them over, clipping all queens' wings that were not clipped the previous season, and equalizing stores so that I know each colony has enough honey to carry them at least two weeks without any fear of starvation. At this time I find, as a rule, each good colony will have brood in four or five combs, the two center combs containing the largest amount. I now reverse the position of these combs of brood by placing those on the outside in the center of the brood-nest, which brings the combs having the most brood in them on the outside. Thus, while the colony has no more brood than it had before, the queen finds plenty of empty cells in the center of the brood-nest, in combs having some brood in them, and she at once fills these combs with eggs, so that in a few days they will contain more brood than those that were moved to the outside, while the bees have fed and taken care of this as well as though its position had not been changed. Thus quite a gain has been made in regard to increasing the brood.

In about 8 days, if the weather is favorable, the whole yard is gone over again, and this time a frame of honey is taken from the outside of the cluster and the cappings to the cells broken by passing a knife flatwise over them, when the brood-nest is separated in the center and this frame of honey, thus prepared, placed therein. As I go over the yard each time I am careful to know that each colony has abundant honey to last them at least two weeks, for if we wish to obtain the largest amount of brood possible, the bees must never feel the necessity of feeding the brood sparingly on account of scanty stores. It is also necessary to know that there are no cracks or open places at the top of the hive to let the warm air pass out of the hive, but tuck all up as nicely as you would fix your bed on a cold winter's night.

After 7 days more have elapsed, I again go over the whole yard and insert another frame of honey in the center of the brood-nest prepared as before. If at any time I am short of honey, I use sugar-syrup made by taking confectioners' A sugar and dissolving it in hot water (at the rate of one pound of water to two pounds of sugar), by placing the two in an extractor can, which should be placed some three or more feet from the floor. Stir well till all is dissolved. Now, procure an old pan of the ordinary size and punch the bottom full of holes about 1-16 of an inch in diameter, punching the holes from the inside of the pan, when it should be placed under the faucet to the can containing the syrup. Immediately under the pan place another can if you have it (if not a wash tub will answer), and you are ready for business. Take an empty comb and lay it down flat under the pan and on the bottom of the can, when you will open the faucet letting the syrup out in the pan till enough has run out to fill one side of your comb, when you will shut it again. Turn over your comb and fill the other side, and after hanging in your tin comb bucket (wash boiler, or some convenient tin thing which is most always at hand) a little while to drain, it is ready to be used in any spot or place, the same as a frame of honey. I prefer this way of feeding to any feeder in existence. If you wish to make quick work of filling these combs, have an assistant to hand you the empty combs and take the filled ones; roll up your sleeves and hold the combs near the bottom of the can, or low enough down so the falling syrup will force the air out of the cells so they will be filled; turn your faucet so the required amount of syrup will be in the pan all the time, and you can fill them (the combs) almost as fast as he (the assistant) can hand them to you. The sides of the can keep the syrup from spattering about the room, and what is caught therein can be turned into the upper can again. Well, I have taken some time to tell you how to do this, but as I do not expect to tell it again, I thought I would try to make it plain.

The next time I go over the yard I generally reverse the brood as at first, as well as to put a frame of honey in the center. By this time the bees will have hatched out of the combs which were placed on the outside, and as the queen does not lay as readily on the outside of the cluster, these combs will not be as well filled as the center ones.

After about a week more, the yard is gone over again in like manner, and if but 9 frames are used to the hive, *this time* will conclude the stimulating process, for at the end of about 5 days more, or about the 10th of June, all our frames are full of brood, and our colonies in good condition for receiving the surplus boxes.

My next will be about how I manage the weak colonies, and also how I would manage if I wished to keep only a limited number of colonies in an apiary.

Borodino, N.Y.

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For the American Bee Journal.

Yellow or Leather-Colored Bees.

W. J. DAVIS.

In the BEE JOURNAL of Jan. 11th, page 22, Mr. Chas. Dadant publishes a letter from Mr. Heddon, in which he expresses the opinion that I have found something better than the yellow Italians, that is the leather-colored Italians. As Mr. Heddon's letter has been published, it follows that what I have to say, in reply, should have the same publicity.

I take pleasure in saying that I consider Mr. Heddon a close observer of everything pertaining to the apiary, and when he takes a position in "good earnest," and not merely for the sake of provoking discussion, he is oftener right than wrong, but to say that he is always right, is what I cannot concede to any one whose writings I have ever read on bees or their management.

Before discussing points upon which we do not agree, I will mention one upon which we do agree, viz: that we aim to keep bees for the honey they can store for our benefit. I suppose it matters but little whether the color be yellow, black, green, blue or leather, or that they vary in size from that of the house-fly to the bumble bee, if they bring in plenty of good honey, and do not endanger human life by having them in our gardens, and at the same time please the eye. I have heard men say that they preferred the color of the black bee to the yellow Italians, while I confess I prefer the yellow, and others prefer a mixture of the two.

It is evident to my mind, that the bee of the future (if not of the present) will have some other color. Messrs. Dadant and Heddon say give no more leather, while I and others say give us more gold. I would not be understood to advocate the production of yellow bees at the expense of honey-storing qualities. Can these gentlemen assign any reason why leather-colored Italians can amass any larger stores than the yellow Italians? I verily believe that it is more difficult to keep the latter up to the proper standard in any locality where black bees exist, or even a mixed breed, where the mother bee is from an objectionable race.

I am still breeding the yellow Italians. I presume Mr. Heddon did not intend his letter for publication, but if he desires to compare notes on the relative value of the "leather and the gold" through the pages of the AMERICAN BEE JOURNAL, here am I. We have taken sweet counsel together by way of the silent pen in the years gone by, and I will promise that we will not come to blows.

Youngsville, Pa., Jan. 28, 1882.

For the American Bee Journal.

Honest and Kind Criticism.

A. J. COOK.

I am more than pleased with the BEE JOURNAL for Jan. 25. It shows that even bee-keepers can criticise in a fair and amiable spirit. In reading the able papers by Messrs. Tinker and Clarke, I was reminded of something I have read about our late lamented President: "In the debates in Congress, Garfield never insulted his opponents; he was always just to them. He never cultivated the cheap notoriety of sneering retort, and he was respected and liked by those with whom he radically differed."

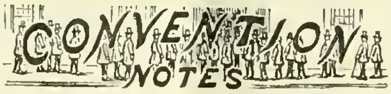
Mr. Langstroth once said to me that he wondered if being stung did not make bee-keepers cross, uncharitable and selfish? I suggested that Satan had more to do with it. Mr. W. F. Clarke, if I remember rightly, has been stung, and so he is a living refutation of Mr. Langstroth's proposition. Let me suggest to Mr. Kohnke that he need have no fear that Mr. Muth will take serious umbrage at fair, candid criticism; that is what we all like and crave.

I am very busy and only have time to say to my good friend, Rev. W. F. Clarke, that my article was written before his criticisms on Mr. Heddon appeared, though published later, so I never thought of him. I could never say that he contradicted well-grounded facts, for I not only don't believe such to be the case—I positively know it not to be true.

In the future I hope to explain more fully in regard to the pollen matter. Mr. Prentiss, of Sandusky, says he knows that pollen killed nearly 100 colonies of bees for him last winter.

Let me add, Mr. Editor, that the canard about the manufacture of comb honey has outlived its usefulness. It is no longer good, even as "a joke."

Cornell, N. Y., Jan. 27, 1882.



Northeastern New York Convention.

The 12th annual Convention of the Northeastern Bee-Keepers' Association, was held at Utica, N. Y., Jan. 25-27, 1882.

On account of the absence of the President, W. E. Marks, and Vice President Doolittle, because of sickness in their families, W. E. Clark, of Oriskany, was chosen President *pro tem.*

After the calling of the roll and the reading of the minutes of the last meeting, the reports of the Secretary, Treasurer and standing committees were read and accepted.

There remains in the treasury, according to the report, $63.65. The Society is in a prosperous condition, both financially and numerically.

Secretary House read the following address from Mr. Thomas G. Newman, editor of the AMERICAN BEE JOURNAL:

Suggestions About Conventions.

BROTHER APIARISTS:—New York has several organizations of bee-keepers, but the "Northeastern Bee-Keepers' Association" is the father of them all, and of right, is, and should be, looked up to as the State Society. So long presided over by that illustrious, but lamented bee-master, father Quinby, its fame is world-wide, and its influence not exceeded by any Society on the American Continent. Its members include some of the most progressive and successful apiarists of the age.

It would, therefore, be eminently proper for the Northeastern Convention to take advance ground, and inaugurate some of the many reforms necessary to the well-being and permanent good of American apiarists. Allow me to make a few suggestions. I seldom write essays for Conventions, and had it not been the special request of your excellent secretary, I should not have written this, and now content myself with simply throwing out a few "hints," and trust that you will give them your best attention.

1. Some plan should be devised to make a more perfect organization, and *knit* together, more closely, all the apiarists of our country. County Societies should be auxiliary to the State Society (for such is yours, except in name), and all the members of the county organizations should thereby become members of the State Society, entitled to all its benefits and privileges, and proportionately bear the expenses of holding such. The Presidents of State Societies should become *ex-officio*, the Vice Presidents of the National Society, and thus co-operate unitedly for the general good—and delegates should be sent from the Counties to the State—and from the States to the National Society. This can easily be accomplished, and would contribute to the general welfare. Organization is *life;* in union there is strength. Disorganization is *weakness*, and leads to dissolution—*death!*

2. The present method of conducting conventions, by so many and such long essays, is killing in its influence, and often works positive damage to all concerned. To illustrate:

A long essay is read, and before it is ended, those who listen to it are tired out, and forget or do not quite comprehend the points, and so it passes, without being sufficiently understood or discussed—goes into the minutes, and under the sanction of the Society, is published to the world as its views, when, perhaps, it represents the opinions or feelings of but a moiety of those present, thereby doing positive *damage*, because it misrepresents the society in general. If essays are admitted, but one should be thrust upon a session, and if possible that one should be printed, and placed in the hands of the members to be discussed at the next session. In this way some of the difficulty could be overcome, and the detrimental effects avoided.

3. If such organization was obtained it would facilitate correct statistics, and the united power of the apiarists of the Nation could be exerted to demand legislation against fraud and adulteration; obtain redress for injurious rulings of the Postal Department, such as denying the admission of bees to the mails, etc., and correct the unjust discrimination of railroads in classing honey at exorbitant rates when they carry *similar* staple articles at one-fourth the freight demanded for honey.

Again, a *brotherly* tie would be formed—helping one another—not only in the matter of marketing our crops, but perhaps in helping the unfortunate, succoring the families of deceased members, and possibly providing for those overtaken by calamities, etc.

These are but a *few* of the things that could be accomplished by united effort, but we only wish to throw out these suggestions, and leave it with others to discuss the matter, and devise a scheme for carrying it to a successful issue.

But I will not weary your patience by further particularizing—while I am absent in body, I shall be present in spirit, and sincerly hope your meeting will be a success, and beneficial not only to yourselves but apiarists everywhere.

Chicago, Ill.

The essay was discussed by Messrs. Bacon, of Verona, Snow, of Fayetteville, Clark, of Oriskany, and Dickinson, of South Oxford. The remarks of these gentlemen were generally in accord with the spirit of the essay.

The next essay, read by the Secretary, was by James Heddon, and was entitled the

Improvement of the American Italians.

How to obtain the best bees is an absorbing theme among our fraternity just now. Well may it be, for, as you all know from experience how varied has been the results from different colonies, supposed to be equal in all respects. You well know that in this lies a large portion of the cause of success. We have experimented with the Italian bees, the German bees, the Cyprian bees, Syrian bees, etc., and yet it remains an open question which are the best,

True, a majority prefer the Italians to the Germans, but a considerable minority yet prefer the German. A fact worthy of our careful consideration, is that among those who, by theory and practice, adhere closely to the German, are men who have had large experience with both races, and who are extensive and successful honey producers. Many of these men have preferred hybrids to either race in its purity; others have not liked them. In my judgment, both classes arrived at their conclusions through their experiences, and both drew logical deductions from their different standpoints. Among each of these races we notice strains that differ widely from each other. Our success with hybrids depends upon two facts, the skill possessed in obtaining good strains of each race to start the crossing with, and the judgment and strains used by the master in superintending these crossings.

My experience has forced me to know that individual colonies of a strain differ from each other more widely in their virtues, than do different strains; further, that strains differ more widely than races, so far as I have used them, my use being confined to German and Italian bees.

I have no doubts, after 5 years of experimenting, that virtuous traits of character in the bee are as surely transmissable as are qualities in other animals. I believe I am yearly demonstrating and reaping benefits from the fact. No bee will ever satisfy me that does not possess qualities that are identified with the German bees alone. The same with the Italians alone.

I would that I was at liberty to give to you the verbatim contents of several letters I have from intelligent and experienced breeders, who are yearly filling the demand for thrice-emerged Italians. It has been found far more profitable to fill a present demand in a wrong direction, than to create a demand in a right one.

From what I can learn I do not, at present, think that the Cyprian or Syrians possess any special trait of character, not embodied in the virtues of the two older races, worth bringing into our breeding. A few vital points in all that we can afford to work with at once. We have about the same number of propensities to guard against, of course, viz.: the opposites of those for which we are breeding.

The older members will recollect that during the early days of the Italians in America, from among the reports of the leaders of the present, came words like these: "I like the Italians better than the blacks, and the hybrids better than either, if they were not so cross. They beat all I ever saw as honey gatherers." Another, "My pure Italians go ahead of my hybrids and blacks; my hybrids are good, peaceable bees, but not as good gatherers as the pure Italians."

It is neither just nor logical to say that such statements were false, but we have reason to believe that from variations and sportings, came these different experiences.

These variations, I think, invite us all to improve our stock.

We have the enormous advantage of rapid generation. We have had the disadvantage of no control over the males, but now I find, in my present conditions, that I have almost perfect control over them. I have the only bees (222 colonies) kept within 3 or 4 miles. I have used selected combs, and those built on full sheets of foundation on wires, and find that by a little care, I can stock the air with about such drones as I wish.

As natural as the ebb and flow of the tide, has come up the cry of "hold on," "don't import any more bees," "we have got bees here now better than those we import," "why, they are buying and carrying back to Italy our American Italians."

These statements and acts are not the result of theory, but of practice, giving us demonstrations of facts. I think the desire for Cyprians and Syrians came from the facts that there was no longer any cause to import Italians. How came this change?

In the business of breeding *off* black and *on* yellow rings, our attention was called to the wisdom of breeding in some qualities. Almost every breeder bethought himself to choose the best business colonies when picking out his yellowest bees. Those who have closely watched the results of their labors, are seeing that nearly all the improvements they have made have come, not from change in race or color, but from breeding from the best acting colonies; that, instead of saying, "I will pick out my best acting colonies from among my yellowest to breed from," they should have said, "I will pick out my yellowest from among my best acting colonies, if I must supply yellow bees in order to satisfy my patrons." Now, I think that no experienced and observing breeder will differ from me, unless on the point of whether he should start with pure yellow bees alone, or both the races.

Whoever takes issue with me upon this point, I think will be forced to admit that the German or black bees possess some very valuable qualities, that the Italians do not. All the room left for argument then, is as to whether we can add to our "coming bee" these superior qualities, without necessarily taking with them some poor qualities possessed by the same race. I am forced to say that I know that I can, and have done it. I will state here and now, that I, as a comb honey producer, would, were I confined to one race or the other in its purity, choose the German bee.

I firmly believe that the lauded leather-colored Italians were shaded by a dash of black blood, which has become fixed. I also believe that far better bees than these can be produced by the same process under the direction of reason.

Why, I, like many other special apiarists (of whom New York has a large share) prefer the production of comb honey. I will leave for another paper, but such being the case, am I not justified in refusing to give up the speedy and white comb-building propensities of the German bees, also their superior disposition to store in the surplus department rather than the brood combs, and their consequent reluctance to swarm? Are not these admitted peculiarities of the black bees? No, the yellow ones; and are they not vital points?

Dowagiac, Mich.

This essay called forth a discussion of the nature of the different kinds of bees, which was participated in by very many. The discussion was general, interesting and profitable.

The question of puncturing grapes was brought up. This is important among bee-keepers, and it is one over which legal difficulties have often been threatened. It was the unanimous opinion of all present that honey-bees never under any circumstances puncture the skin of a grape. Tests have been repeatedly made, and in no case has any bee ever been known to touch a grape that was not punctured. Black ants are the enemies of the grapes. Two bills were introduced in the California legislature to do away with all bees on this account. A careful examination and an extended debate proved that there was not a single case of bees puncturing grapes. The society placed itself on record on the matter by adopting the following resolution introduced by C. R. Dickinson, of South Oxford, and amended by Mr. King, of New York:

Resolved, After due investigation of well known and numerous cases, the Convention unanimously asserts that the honey-bee never punctures the skin of a perfect grape or any other fruit. But that the sucking of juices from fruits is only from that which has been punctured by other insects, birds or natural causes.

A motion was carried that the Secretary cause to be printed 200 copies of the above resolution and that these copies be distributed among the members and various publications.

During the day 28 persons were enrolled as members of the Association; the total membership is now about 160. A. J. King, editor of the *Bee-Keepers' Magazine*, was made an honorary member.

At 5 p.m. the Convention adjourned to meet at 7 p.m.

EVENING SESSION.

At the appointed hour the Convention was called to order by Mr. Clark, President *pro tem.* The Secretary read a communication from Messrs.

Bingham & Hetherington, asking that their smoker and honey knife should not be entered for premiums or competion. The request will be complied with.

Secretary House also read a communication from James Nipe, of Spring Prairie, Wis., making a complaint that the AMERICAN BEE JOURNAL continually misquotes, and endeavors to weaken the honey market.

After some discussion, Mr. House moved that the matter be laid on the table, to be called up at the next annual meeting, and that a committee be appointed to investigate the matter and report next year. Mr. Dickinson was appointed as that committee.

L. E. St John then read a paper by Chas. Dadant, on "dysentery, its causes, effects and prevention."

The next topic for discussion was the "Disposal of Products."

Under this head, there was a talk on temperance and glucose. The question of using extracted honey in the manufacture of beer and wines was also ably discussed, and the feasibility and probability of such a use were shown. It seemed to be the opinion of the Convention that honey should be sold only to recognized, upright dealers, and the adulteration of honey with glucose would not then take place. Better prices would as a consequence be realized.

The Convention adjourned until 9 a.m.

SECOND DAY.

The Convention was called to order at 9:15 a.m., by acting president, W. E. Clark, of Oriskany. The reading of the minutes followed, after which several persons were admitted to membership.

The following committees were appointed: On implements, L. E. St. John, N. N. Betsinger and W. A. House; on question drawer, J. C. Schofield, S. M. Locke and A. J. King.

The topic for discussion, "Experiences with comb foundation," was then taken up. The remarks of Mr. Root seemed to open a very profitable discussion. He claimed that the use of comb foundation was necessary to the thorough bee-keeper. He admitted that much of the foundation sold was adulterated, and the object must be to get that which was the most free from adulterating substances.

Mr. Bacon agreed with the remarks of Mr. Root, but did not think that a heavy foundation was advisable.

Mr. Dickinson argued in favor of a heavy foundation for the brood-chamber, and a light foundation for surplus boxes.

Mr. Locke stated that a foundation for the brood-chamber should measure 6 feet to the pound.

In reply to a question of Mr. Betsinger as to whether one could detect the adulteration of wax with ceresin or paraffine, Mr. Van Deusen said that unless there was considerable adulteration, he could not. That gentleman also stated that foundation 10 or 11 feet to the pound was advisable for surplus boxes. He exhibited specimens of foundation, partly drawn out, on flat-bottoms.

Secretary House also exhibited samples of pure foundation, wax mixed with paraffine and ceresin. The discussion was further continued, and the following resolution, offered by Mr. Dickinson, was adopted:

Resolved, That the adulteration of comb foundation in any manner is to and is denounced by this Convention as much as the use of glucose should be.

The Secretary read the following essay by W. J. Davis, on

The Best Method of Rearing Queens.

I have not egotism enough to suppose that I can instruct the members of so intelligent a body of apiarists of the old Empire State, in any department of our fascinating pursuit, especially the one assigned me (by your affable Secretary) which lies at the foundation of successful bee-culture, and any effort so to do would be but reflecting back a glimmer of the light received from that pioneer of practical and scientific bee-culture, Mr. Quinby, of your State. Your large and prosperous Association is, to my mind, an evidence of the enthusiasm he labored to awaken in a long-neglected industry. His pen enriched the pages of the agricultural press of your State in ante bee journal days, and led many a groping novice from darkness into light. May the names of Langstroth and Quinby never be forgotten while a flower blooms and a bee's wing cuts the summer air in this fair land of ours.

In the consideration of our subject, we shall go beyond the mere mechanical part of queen rearing, for I address a convention of bee masters, not novices, and first consider the object to be attained. That the queen bee is the "main spring" of the hive, there will probably be none to question, and to produce her ladyship in that way that shall develop the highest excellence, such as vigor, beauty, longevity, gentleness, etc., should be the aim of every bee-keeper, whether he rear queens beyond the wants of his own colonies or not.

When we look into the laws that govern the production of animal life, we find that one law obtains, from man down through all the grades of lower animal life, viz: "The animal after his kind."

While climate, food and surroundings have their influence, man is still man, whether barbarous or enlightened, and his domestic animals when bred with any special peculiarity or trait in view, have developed the traits desired. While there are many desirable traits in our present strain of Italian bees that should be fostered in breeding, I have named but four, deeming that further enumeration would make my essay undesirably long.

The first trait, vigor, strength, power of endurance. As bee-keepers, we do not want all our hopes blasted by the occurrence of unusually severe winters, which are liable to occur in our variable climate. That one colony of bees lives, and another by its side dies under precisely the same conditions, is evidence of different powers of endurance.

I have at different times exposed a number of laying queens, confined without workers, in cages, to a low temperature for bees singly, and watched the result. All were supplied with the same kind of food, some would become dormant in a short time, while others would live several days.

I know no better term than to say the latter possessed more vigor, or power of endurance, and, as the queen, so would be bee worker progeny, easily chilled in summer or winter, or possessing power to resist unfavorable surroundings.

2. Beauty. Men love the beautiful wherever seen. "Beautiful women," beautiful landscapes, beautiful homes, beautiful flowers, beautiful honey and beautiful bees. Some men may profess a contempt for the beautiful, but we don't believe their professions, and if forced to take them at their word, we sorrowfully admit them to be moral monsters. But we hope there are none such in our fraternity. The flimsy assertion of some, that we sacrifice productive industry as the price of beauty in our bees, is not sustained by analogy, or unprejudiced experience. To possess the highest type of stock of any kind, is a source of pleasure. To have our customers say, "The queen you sent me is the handsomest one I ever saw," is certainly pleasant, to say the least.

3. Longevity. It is a fact that some queens die after having laid eggs but a few weeks, while others live and prosper 4 or 5 years. All life insurance companies are particular to inquire as to the longevity of the parents of the applicant for a policy of insurance, claiming to calculate the risk with much certainty. I shall assume that the same rule holds good in the breeding of bees, and that a long-lived queen will be more likely to produce long-lived queens and workers than one that lived to be only 1 year old. It will readily be seen that if we can add but one week to the average life of the working force of the hive, we have added largely to the profits of the apiary. A week of added life to the worker bees would be a week of active out-door labor. To rear bees that die off quickly (comparatively) is a profitless pursuit.

I deem it a very great mistake to suppose that the queen that can lay the greatest amount of eggs in a given time is therefore a desirable queen. If we assume that the queen bee is capable of laying 500,000 eggs during her life, shall we have them laid in 2 years or 4? In my early experience with the Italians, I had queens that would keep 10 Langstroth frames and all the surplus capacity I could give them full of brood, the bees during the clover harvest working for dear life to feed the baby bees, which, in a short time, were to be only useless consumers. If there be any spot on earth where the honey flow is abundant and perpetual, my argument would not apply, but that place is not Western Pennsylvania.

I found that such colonies, while they yielded an undesirable increase, never gave me any surplus honey, or even provided themselves with sufficient winter stores, while other colonies with far less brood would give a good yield of surplus honey, and well-filled combs of winter stores; and subsequent years of experience have fully satisfied me that excessive breeding is not a trait to be desired in the "coming bee," but longevity is.

4. Gentleness or amiability of temper.—The sting of the bee is bad enough, even to professional apiarists, but they are not the only ones affected by the presence of vicious bees. We claim the right to keep bees in villages, in corporated towns and cities, and if we, as bee-keepers, tolerate cross bees, they and we must grow more and more in disfavor with the people, and ordinances for their removal from such places will become more frequent. In short, every consideration of wisdom, peace and comfort, dictates the suppression of the vicious type of our honey bees.

Having thus defined some of the qualities to be kept in view in rearing queens, we will next consider briefly when and how to proceed. 1. Vigorous, long-lived queens cannot be reared much outside the swarming season, and no interference of man can produce better queens than the old fashioned way of natural swarming, provided the swarming colonies are of the type above indicated. But when the supply of queen mothers is very limited, the process is quite too slow. Hence we must resort to the removal of the queen mother from one colony to another at intervals of about 10 days, or the removal of brood from the hive of said queen mother. In my own practice, I prefer to remove the queen, and queens produced by the removal of the queen mother at any time when a good degree of activity exists in the hive with plenty of bees, brood and eggs, and increasing stores, I have never been able to discover that they were in any way inferior to those produced by natural swarming, while those reared out of season, certainly are inferior. 2. At what age shall the queen mother be? I take it that, with the queen bee, as with man and all our domestic animals, there is a period of greatest vigor, and there are times, whether perceptible or imperceptible, of gaining or declining strength. Hence, in selecting queen mothers, I would alike avoid the extremes of life; I would not breed from a queen less than one, or more than 3 years old—probably the best age is the summer that the mother bee is 2 years old. About 10 or 11 years since I purchased an Italian queen from, at that time a prominent breeder, who professed to have reared 6 generations of queens in one season, and I guess he had. Without assuming it as a fact in beeology, I would submit it as an hypothesis that the continued breeding of queens from young queens, will stimulate too excessive breeding at the expense of vigor, longevity and honey storing qualities.

As to how to produce the greatest number of queens, shall form no part of this essay, as bee-keeping has suffered enough from that source. If queen breeders would kill at sight every objectionable queen, and sell less in numbers at a better price, it would be quite as well for the breeder, and much better for the purchaser. Allow me to wish you a happy and successful session of your Association, and a prosperous year for the blessed bees and their owners.

Youngsville, Pa.

Mr. Root thought that the essay was a most important one, and proper action should be taken with regard to the selling of queens.

Are Bees A Nuisance?

Question—Is there any law against keeping bees in incorporated towns or cities?

In reply to this question, Mr. House gave an instance of a man keeping bees in Syracuse, who was driven from the city by the authorities on account of his bees being a public nuisance.

Mr. King, of New York, ridiculed that idea, and gave instances of his bees, which are kept on a building in Park Place, New York, swarming on an Italian's stand at the corner of Park Place and Broadway. It was an object of curiosity, and not only was it not considered a nuisance, but he received the best advertisement that he ever obtained. The papers took up the matter and the incident was circulated widely.

Adjourned for one hour and a half.

AFTERNOON SESSION.

The Convention reassembled at 1:45 p.m. Secretary House appointed L. E. St. John assistant secretary. Several new members were elected.

The following officers were elected: President, W. Clark, Oriskany; Vice President, L. E. St. John, Greene; Secretary, George W. House, Fayetteville, Treasurer, R. Bacon.

The Convention then balloted for next place of meeting, with the following result: Syracuse 16, Utica 11, Albany 12. Syracuse was chosen, and the third Tuesday of January, 1883, the session to continue for three days.

The Secretary read the President's annual address on

Wintering Bees.

As soon as possible after the honey season has closed, I examine my bees thoroughly and see what condition they are in for the coming winter. I am particularly careful to see that they are strong in bees, for I consider that very essential to success. I find that it is poor policy to attempt to winter weak colonies. If they are too weak I make them strong by uniting early, until they are all strong. If any are queenless, now is the time to supply them, as we can use the surplus queens for that purpose. There is no difficulty in uniting at this time of year if we give them a thorough smoking, so that they may all have the same scent and fill themselves with honey. In uniting, the hive that is left empty should be removed from the stand, and then bees will not return.

My next care is to see that they are well supplied with stores for winter. They should have from 20 to 25 lbs. of good capped honey to be safe. I feed the light by taking frames of honey from those that have more than they need, as it is a very easy matter to make them all safe in this respect. If they are short of stores feed 7 parts loaf sugar to 4 of water, putting it into tin dishes, oblong in shape. They may be made to hold 6 or 8 lbs. Put a float of wood in the dish. Feed on top of brood chamber, until they have sufficient stores for winter use. My next care is to remove combs from the brood-chamber until the bees fill all the combs that are left.

I use the new Quinby hive, and winter them in from 5 to 6 frames. Colonies that do not fill 5 frames I do not consider strong enough for winter. I unhook the frames from the bottom-board, and hook them on a frame that raises them just an inch from bottom of the hive. I put them at right angles to the position they occupy in summer, as this allows me to completely surround them with the packing; which consists of dry pine planing mill shavings. I then cover the frames with pieces of heavy hop bailing, which is the best and cheapest cover I can find. I also fill the space over the frames with the same packing, and leave an air chamber of two inches under top board for the moisture from the bees to collect and pass out at a wire screen near top of hive.

I have the entrance of hive open to give the bees a chance to fly whenever an opportunity presents itself. When the weather is stormy, cold or windy, I put a board in front of entrance, against the hive to prevent a direct draft. When bees are thus cared for, they will winter very safely on their summer stands. I have usually wintered in this way without the loss of a colony. Last winter my loss was about 25 per cent., but was owing to the fact that they were moved and packed after cold weather set in. I could not get the shavings to pack them with until then. Most of my bees last winter were wintered in a cellar, and my loss was 75 per cent. I have tried very hard to winter in-doors successfully, but have not succeeded very well and have become disgusted with it, as my experience has been very sad. When wintered on their summer stands as I have described and prepared early for winter, I feel perfectly safe, for I know they will winter well. When thus prepared, they will not fly in winter unless it is warm enough for them to return safely to their hives. But what is best of all, they do not dwindle in the spring. I have used the Quinby hive since 1872, and do not believe there is as good a hive made for wintering and carrying bees safely through the spring.

I cannot close without referring to spring. The winter packing is very essential in spring, and it prevents the bees from flying when they should not. It also retains the heat which is so necessary to successful brood-rearing. The packing should not be removed until we have settled warm weather. I usually leave it until the bees are nearly ready to swarm. When brood-rearing begins in earnest the cloth cover should be removed from top of brood-chamber, and be replaced by enamel cloth, in order to retain the moisture which the bees need so much at this time of year. If they cannot obtain it in the hive they will leave many times when the weather is too cold for them to return. This brings me to spring management, which I will reserve for a future occasion.

N. N. Betsinger, Marcellus, addressed the Convention on "Wintering bees, and the cause and prevention of dysentery." His remarks were applauded.

Mr. Barber, of St. Lawrence county, next spoke, corroborating Mr. Betsinger's ideas in regard to heat. Bees should not be removed from the cellar before willow bloom in the spring. He allowed no cold air in the cellar.

Mr. Root related the experience of Mr. Hoffman in wintering, which substantiated the arguments of Mr. Betsinger and Mr. Barber. He thought that bees which wintered best consumed the least honey, and advocated a high temperature.

Mr. Barber said : I have 193 colonies in a cellar, 16x19 feet.

Mr. Betsinger said the temperature and the atmosphere should be changed every two hours if necessary. To do this the house should be under perfect control. If the bees are easy, they will make no noise. Bees should never make a noise. When bees fly in the spring and spot the snow, it is a sign of dysentery.

Mr. Bacon said he found his bees all right and he believed them healthy when they made a low murmur, like distant roar of wind in distant woods.

Mr. Barber said bees should not be set out when there was snow on the ground. He had found that the colder the day the greater the deposit of excrement.

A. J. King said he thought heat was good for bees.

Mr. Barber said last year he had wintered 200 colonies with a loss of 8, 4 by mice and 4 by starvation. He had wintered as many as 160 colonies without losing any. The farmers in his section all wintered bees according to his plan, and did so successfully. To ventilate he used a 3-inch tin pipe, 24 feet long, going from the cellar to the outside. He did not ventilate the hives at all, but left them open at the top. He thought more bees were killed by ventilation than by any other method. There was no way in which fresh air could get in, except through cracks and crevices, as no cellar was perfectly air-tight. L. M. Barber and D. Barber each wintered over 100 colonies last winter, and lost none, either by wintering or springing. In his own cellar he found some dead bees in the spring. There were about 3 bushels to a hundred colonies.

Mr. Bacon said he covered the top of his hives with straw to prevent a current of air going through.

In reply to a question, Mr. Barber said he would not think of wintering 15 or 20 colonies in the same manner as he did 100. There would not be heat enough in the ordinary cellar. He found excrement only in the shape of dust. The bees did not besmear the hives.

Mr. Betsinger said the latter statement showed that his statement that feeding honey causes dysentery, to be correct. He had not finished his experiments, but should continue. He had been at school, and should continue to go to school. The late mortality among his bees had proved very valuable by giving him experience.

Mr. Bacon asked what kind of foundation comb was best for surplus honey? The question was not answered.

Mr. Vrooman gave the Schoharie county method of wintering, which he said was the best of all. Box hives were placed on strips in the cellar, and a temperature of 48°. These bees wintered dry and without consuming any honey. In the spring, out of 85 colonies, about a peck of bees were swept up. The tops of the hive were entirely tight.

Mr. Bosworth moved that a vote of thanks be tendered to Mr. Betsinger for his able essay. Carried.

L. C. Root, of Mohawk, gave an address on "The Most Successful Method for the Prevention of Swarming."

Under the head of miscellaneous, the subject of "Wintering" was taken up again. In reply to a question, Mr. Barber said from 15 to 20 per cent. of his bees were found breeding in the spring.

One delegate said he had had very good success, but he was compelled to put an absorbent in top of the hive to prevent comb mold from moisture.

Mr. Betsinger said he kept such a high temperature as to drive moisture out of the hives through the pores of the wood.

Several delegates said this could not be done, because the inside of the hive was covered with propolis, and the outside was painted with two coats of paint.

Mr. King said moisture would accumulate during the breeding. This contained a certain amount of carbonic acid gas, which was deadly poison. He opposed upward ventilation, except as afforded through chaff or other loose material.

Mr. Dickinson said a colony would consume about 25 lbs. of honey during the winter. About 75 per cent. of this was moisture, or about 3 quarts of water. He would like to know how this amount of water would pass off ?

Mr. Betsinger said the amount of water would pass off through a hole as large as a knitting-needle in 35 minutes, and no one would know it.

Mr. Barber said the cellar he wintered in was moist, and sometimes very moist. He thought the moisture was beneficial. His bees were certainly not injured by it. He thought it not half as dangerous as wintering out-doors.

Mr. Barber said he even had 6 inches of water in his cellar many winters. He set every hive on the bottom-board except the lower tier of hives.

On motion of Mr. Dickinson, a vote of thanks was tendered to Mr. Barber for his ready and clear replies. Adjourned.

The evening session was devoted to the exhibition of hives and implements used by bee-keepers. Mr. Stoddard, an inventor, who was present, exhibited a model of a lift bridge, which is quite ingenious.

THIRD DAY.

The morning session was called to order at 9:15 a.m. by Vice President L. E. St. John. After listening to the reading of the minutes by the Secretary, A. J. King, of New York, read his essay on "Failures," which was adapted especially for beginners in the art of bee-keeping.

The National Convention.

Secretary House read a letter from Professor A. J. Cook, President of the North American Bee-Keepers' Society, asking that the present Convention consider the three following points: First, the desirability of appointing committees from different sections to secure local associations, either county or district; second, the importance of a separate building and a grand display of honey, beeswax and implements at the State Fair, and thirdly, the question of adulteration. This should be properly denounced.

The following criticism, by Geo. W. House, on the National Convention, published in the *Bee-Keepers' Instructor*, by request of several members was then read by Mr. Locke:

In regard to the National Convention. We wish to speak of the manner of electing officers. We think it in bad taste, and that it has too much the odium of ringism about it to be even palatable. Every member *should* have the privilege of a free ballot. No gag law.

When that society was organized, the constitution and by-laws were in accordance with American custom and principles. It was organized with the intention of holding its sessions North, South, East and West. But during the past few years there is seemingly little or no regard paid to custom and privileges.

Much was said by certain persons about the resolutions passed at the Northeastern Convention less than 2 years ago. Yet where is the earnest and honest thinking bee-keeper, that has the best interests of the fraternity at heart, that will not admit that those resolutions have been the means of doing *more real good* than any similar action in the American apicultural history.

But where is the honest apiarist that can truthfully say the same in regard to the action taken by the last National Convention. I refer directly to the address of Mr. T. F. Bingham, entitled "A Partial Review," and the action taken by the Convention concerning it.

While I wish it distinctly understood that I fully appreciate the noble and earnest work put forth by the illustrious Rev. L. L. Langstroth in his inventions, improvements and writings, and while I am to-day in full sympathy with his conditions, etc., yet I claim that that body has caused to be placed upon its record a stain, never to be blotted out. Yes; not only a stain, but they have perpetrated the greatest outrage ever recorded in the history of American apiculture. We refer to the attempt to "lionize" a few at the expense of others, and still they proclaim: "Honor to whom honor is due." Was there ever a Quinby? or a Wagner?

Fellow apiarists, when I read that address and the action taken upon it, it makes the very blood chill, as it courses through my veins. O! *where* is the true American apiarist that can digest that action and withhold the emotions caused by honest inward feelings? Does it not bring you face to face with the discoveries, the inventions, the practical teachings, the benevolence and the immortal fame of our beloved and lamented M Quinby, the father of American apiculture?

As Friend Hetherington has truthfully said, "Thousands are to-day enjoying a delicious and wholesome article of food that would have remained ungathered, except for his earnest advocacy of the business as a source of revenue to the Nation, and profit to the bee-keeper," and thousands of bee-keepers will blush with shame to think of the injustice done him at Lexington, Ky.

Gentlemen of the North American Society; you that were participants of that farce; can *you*, upon taking a sober, second thought, say to your fellow apiarists that your considerations were fairly and impartially rendered, with justice indiscerpible?

Allow me to quote from Mr. Bingham's address. He says: "The system I have denominated the American, is the substitution of absolute control, for the 'happy-go-lucky' methods previously pursued. The early writings of the lamented M. Quinby, called the 'Mysteries of Bee-Keeping,' which were among the most conspicuous of the closing era, may be appropriately called its closing chapters; while the writings of the Rev. L. L. Langstroth, and the invention of the movable-comb hive, may be justly called the opening chapter in improved bee-culture, and the foundation of the American system."

Reader, pause, and ponder well, lest you render an unjust decision. Where is the intelligent bee-keeper that can endorse this taking from one and giving to another? I for *one* am willing to go on record as denouncing this heinous offense. The sun may cease to give us light. The diurnal revolution of the earth may stop; but *never* will the bee-keepers of America submit to such an unjust discrimination.

But further on Mr. Bingham says: "Is it of any value to bee-keepers of to-day, or the bee-keepers of the future, that the memory of the inventor of the movable-comb bee hive, and the honey extractor, and comb foundation, should be revered and perpetuated?"

O! Father of the Heavens! Is this "Honor to whom honor is due?" Is there no Frederick Weiss? Can it be there was never a Herr Hruschka? Brother apiarists, shall we submit to such an injustice? No, *never!* but we *appeal* from the action of that body to the apiarists of the world, remembering that "Truth crushed to earth shall rise again."

I wish to call the reader's attention to the last three paragraphs of that address as published in the AMERICAN BEE JOURNAL, page 335. Can you not discover the shadowing of the "Patented Smoker?" Can you fail to notice the plea for protection to that implement? and the attempt to wrest *that* invention from its inventor? Every one of common sense knows that if he had a valid patent, infringements could be abolished by lawful proceedings. Perhaps they will be, for we read that we must use no other, if we wish to be exempt from prosecution in using them. This may have its effect with the ignorant, but we don't believe, at this enlightened age, that "bull-dosing" will work.

Notwithstanding all this, the North American Society in convention assembled at Lexington, Ky., and the 7th day of October, 1881, did there and then cause to be recorded the following motion, which, according to the minutes, was passed with great unanimity:

"Moved, that the sentiments expressed by Mr. Bingham be endorsed as the views of this Convention."

Verily, verily, if such a course is allowed to obtain without notice, our National Association will surely die, a disgrace to American apiculture.

Fayetteville, N. Y.

This called forth much discussion upon the subject of smokers, for Mr. House had criticised the action of the National Convention in indorsing the smokers of Mr. Bingham, and claimed that the entire merits of that smoker was due entirely to M. Quinby.

Mr. Clark, who had just entered, thought the Convention should not fritter away its time by trying to decide as to whom invented the smoker. He said, however, that he would not use the Bingham smoker under any consideration. He did not think that Bingham should be upheld in using the inventions of Quinby. Because the true inventer, Mr. Quinby, did not get a patent and Bingham did, we are obliged to pay for it.

Mr. King—I have carefully examined the Bingham patent and I have found that his patent covers everything and nothing. I have manufactured smokers right along and I have not infringed on any patent. I do not hesitate to say that Quinby was the first inventor.

Mr. Locke—I believe in right and justice every time. M. Quinby is revered and loved by all apiarists. We ought to denounce any injustice that has been done to Mr. Quinby.

On motion of Mr. Betsinger, a committee was appointed to draft resolutions condemning the unjust resolutions passed by the National Convention. The President appointed as such committee Messrs. Van Deusen, Clark and Bacon.

Secretary House then read the following address on

Co-Operation:

Mr. President and Gentlemen:—When we look about us we cannot fail to notice the wonderful achievements accomplished by associated action. At this enlightened age no branch of business can successfully compete with its adversaries without a combination of interests. Co-operation and concerted action have wrought wondrous changes in every conceivable branch of industry. Think of the vast strides and the great improvements as they have advanced during the past twenty years; not alone in invention, mechanism, agriculture and the press, but also in apiculture. To-day we see associated system of dairying, in manufacturing and marketing their products, and in breeding the various kinds of stock.

We see a combination of interest in mining, in transportation, and in buying and selling stocks, grain and all the leading staple products. We see combined action in manufacturing, on the part of the tradesmen as well as the capitalists. We have "Boards of Trade," Protective Unions, Mutual Life Assurance Associates, and so on through the category. *Co-operation* is the key to all.

It is true we have kept pace with kindred pursuits, as far as knowledge, invention and production are concerned. But it is also a fact that the protectives of our interests have been sadly neglected. Seemingly but a comparatively few recognize the value of the contemplated action, I see no reason why we should not put business into our Association. Many benefits may be derived from such action. Not alone in keeping pace with other industries, but in the advancement of our science and the protection of our interests. The lumber we buy for our necessary buildings, hives and boxes, the tools we use in making them, the nails used for putting them together, and the glass we use in preparing our honey for the market, are all protected in their prices by strong combinations. Then why should we hesitate in adopting anything that may prove an advantage and a protection to our business. By purchasing our supplies, such as hives, boxes, crates, glass, foundation, implements, literature, etc., at wholesale or in job lots, we can obtain manufacturers' prices, and secure to the average producer a saving of from fifty to one hundred dollars annually. This is no small item when we take into consideration the competing elements that now seem to be damaging to a certain extent.

By careful investigation from actual transactions, I can authoritatively say, that under efficient management the contemplated associated action will prove a clear gain of one per cent. for every pound of comb honey produced. Therefore, during such seasons as was 1878, or at any time when our larger markets are crowded, we can sell our products for the one cent per pound *under* the market, and at the same time realize as *much* as those who do not enjoy such privileges. Many are the ways in which we might be benefited by *co-operation* and a unity of action. We should remember in all our transactions that "A dollar saved is a dollar earned."

With a unity of action we can bring into use a uniform style of package;

a uniform system in grading and marketing. A world-wide reputation can be established for our grades of honey protected by any appropriate trade mark we think advisable to adopt.

With co-operative effort, we can place apiculture on a footing second to none of the many national industries; and command a power that will force a recognition of our products as a staple commodity, and command respect from all foreign countries. In fact co-operation and a combination of interests, are the powerful mainsprings that have revolutionized the business portion of the world; and judging from the advancement made in the past 20 years, who can venture to predict the position we shall occupy 20 years hence?

I would submit for your earnest consideration the feasibility of incorporating a Mutual Benefit Association for Life Assurance, consisting entirely of bee-keepers. Common prudence ought to prompt every man to seek reliable insurance. Where families would now be left in debt for their homes (or perhaps without a home), with a certificate in a properly managed assurance society, many bee-keepers would be comforted in knowing that their loved ones would be left in a condition where they could help themselves. With little effort on the part of each of us, such a society can be organized and sustained with but little expense to the beneficiaries.

Our deliberations should be in truth and earnestness, remembering that in the past our "Northeastern Association" has been the first to rebuke injustice; the first to correct evils and protect the interests of our fraternity; the first and always on the alert to sustain a good cause when the interests of the fraternity were at stake

It is acknowleged that our Association stands at the head of any of its kind in America.

It is conceded that our deliberations and conclusions are the highest known authority. Thousands are to-day anxiously awaiting the publication of our proceedings. Then let us hold fast to that which we have gained in the past; strike while the iron is hot, and place our far-famed Association on a higher and a grander footing, until we can proclaim to the world, *Sans Pareil.*

Fayetteville, N. Y.

This essay elicited the warmest discussion of the Convention, especially the question of the feasibility of adopting a uniform package.

Mr. Betsinger thought the position of the essayist was well taken, and his suggestions should be considered carefully. We can sell to each other as well as a jobber can sell to a dealer.

Mr. Root was particularly interested in that portion of the essay that called for a uniform box for honey. The important thing for us to consider is, what is the greatest amount that we can get for our goods. If honey is put up in small, uniform boxes by us, we can dispose of our honey to a better advantage. That at least is the opinion of the dealers.

Mr. Dickinson was interested in the matter, but he thought that it was a game of every man for himself. As a matter of convenience in packing car lots, Mr. Root's idea was a good one, but if I can put my honey through any ingenuity in better shape than my neighbor, and therefore get a better price, I do not care to have my neighbor adopt my plan.

Mr. Root said that it was for the interest of all that a certain standard in market honey should be adopted. We can educate the people to this standard.

Mr. Clark said: I do not believe in the doctrine of every man for himself. I think that if one puts up honey in 1-lb. boxes and he gets a good price, others will follow, and the price will return to its old level. But if we have uniform, one and three-quarter pound boxes, the expense will not be so great, and the price will always be good.

Mr. Locke agreed with Messrs. Root and Clark, that the time has come when we should adopt a uniform box.

Mr. King said this ought to have been agitated some time ago. This diversity of boxes has gone so far that it is almost impossible to crush out now. We can put a stop to the agitation of one-half pound boxes, which is now making, by prompt, decided action.

The discussion took a wide latitude, every one relating his particular experience in selling his goods. Many told what jobbers had advised, and all agreed to disagree upon certain points. In the midst of the talk, which was exciting, yet good natured,

Mr. Betsinger stampeded the Convention by offering a resolution to the effect that a uniform box be adopted. He also threatened in the event of the resolution passing, to press another one that should compel the members to use the box adopted.

Mr. King offered an amendment to Mr. Betsinger's motion that more than one size box should be used. This again carried the members on "the sea of troubles," until Secretary House mercilessly cut all short by a motion to adjourn. This last motion was carried.

AFTERNOON SESSION.

In the afternoon session the resolution in regard to the size of boxes was discussed at length.

Mr. Dickinson moved to lay on the table; lost, ayes 10, noes 19. A resolution making the weight of the box not less than a pound and three-quarters when filled with honey was then adopted.

Mr. Betsinger moved that the Association adopt some kind of a seal to be used on everything passing from the Association. Carried.

Mr. Betsinger moved that a committee of three be appointed to select a seal. Carried.

The Convention selected Mr. Betsinger, George W. House and Mr. Peet.

The Secretary read an interesting paper on "What per cent. of increase is most profitable," written by W. L. Tennant, of Schoharie.

J. Van Deusen, from the committee on resolutions in regard to bee smokers, reported the following which was unanimously adopted:

Whereas, At the late National Convention held at Lexington, Ky., a resolution was passed which partially ignored the instructions and inventions as affecting modern bee-keeping of our friend, the late lamented Mr. Quinby, and particularly the bellows smoker, denouncing them as belonging to an era now passed away, etc., and in his place exalting others far above him, and denominating them as belonging to the modern era of practical and advanced bee-culture.

Resolved, That the action above stated is entirely inconsistent with the facts, and that we denounce the same as nothing less than a slander on the fair name of Mr. Quinby, and a seeking to impose on the intelligence of American bee-keepers.

Mr. Root, from the committee appointed last year to secure the passage of a law to prevent the adulteration of honey and other sweets, with glucose, said the bill against adulteration of sweets in general, was too broad and too sweeping in its provisions to receive the sanction of the Governor. The adulterators of honey buy pure honey in one place and glucose in another, and do the mixing themselves. He thought the law against adulteration now in force was strong enough to cover the adulteration of honey. He did not know how to effect a remedy.

Mr. King said the members of the Association should put up its honey in packages ready for market. The package should then be stamped with the seal. There was a strong law against obliterating or counterfeiting a seal. There is a brand of beeswax, each piece of which is stamped. This wax, though no better than other wax in the market, brought 5 cts. per lb. more, because the purchasers knew it to be genuine.

Mr. Locke said comb honey shipped from the country was shipped to New York, and there cut up and adulterated with glucose.

Mr. Dickinson said the action of the Convention was silly and foolish.

Mr. Barber said he was of the same opinion. The Convention had passed a resolution to use no boxes weighing less than 1¾ lbs., while many of the members had a large number of boxes ranging from 1 to 2 lbs. These boxes would be used at least for 2 years to come. The market demanded boxes of various sizes, and so long producers would be compelled to furnish it.

There was some discussion as to whether it should be placed on the documents of the Association, or on the honey produced by its members. The President decided that the seal would only be on the documents of the Association.

Mr. Betsinger moved that the Association furnish its members rubber stamps with which to stamp its goods.

Mr. Root thought each producer should stamp his goods individually.

Mr. Bacon favored the stamp or seal. All the members would be interested in keeping the product pure, like the patrons of a cheese factory.

If any one was found adulterating honey, the other members would see that he was punished. In unity is strength, and the members of the Association have a common interest in keeping their product pure.

The resolution was amended so that members shall buy their own stamps, and adopted.

Mr. Dickinson, from the committee on implements, presented its report. which was adopted.

Mr. Baum asked that all who intend to use the Vandervoort foundation next season, to arise. Eighteen members out of 31 present, rose.

The following resolutions were adopted:

Resolved, That the thanks of this Association are due and are hereby tendered to the representatives of the *Utica Morning Herald*, and *Observer*, for the very complete report of our proceedings as published in their respective papers, and for other courtesies shown us.

Resolved, That the thanks of this Association are due, and are hereby tendered to all the essay writers.

MISCELLANEOUS.

There being no report from the committee on question box, because no box had been provided, Mr. Root moved that a standing committee of three be appointed, to which questions can be sent during the year to be answered at the next annual Convention. Carried. The chair appointed L. C. Root, I. L. Scofield and E. D. Clark.

Mr. Locke exhibited several races of bees preserved in alcohol, including the pure Syrian, pure Italian, pure Cyprian, Syrian hybrid, Cyprian hybrid and Italian mated with both Syrian and Cyprian, all from D. A. Jones, Beeton, Ont.

Mr. Barber said his plan of keeping honey was to place it in a room thoroughly aired, every day, until it is to be shipped. He left it unglassed. He found spiders around in the corners, and he believed the spiders killed off the millers if any hatched. He stored his honey on the ground floor, and, by leaving it open continually, kept the temperature of the room the same as the outside air

Mr. Peet, from the committee on seal, presented a design, which was adopted.

The roll was called, and 13 members answered that they intended to use the rubber stamps; 9 were undecided, and 3 answered no.

Speaking of the different woods of which the honey boxes are made, most of the members favored basswood. This is even preferable to white poplar, which warps very much when it becomes wet. Mr. Bacon said he had used white spruce and found it very good. It did not warp or split, nor did it stain as easily as poplar or basswood. The President, Mr. Baum, and others, also favored white spruce.

After further discussion, the Convention adjourned.

* * *

☞ The Texas State Bee-Keepers' Convention will be held at McKinney, Texas, on Tuesday, April 25, 1882.

Local Convention Directory.

1882. *Time and Place of Meeting.*

April 11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May — —Champlain Valley, at Bristol, Vt.
T. Brookins, Sec.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

* * *

☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. Demaree, *Sec.*
Christiansburg, Ky.

SELECTIONS FROM
OUR LETTER BOX

Building Straight Combs.—Please tell the readers of the Bee Journal how to extract honey from the combs where built irregular; also, if there is any method to cause bees to build their combs uniform on the frames without using foundation?

John Sherretts.
Norfolk, Ore., Jan. 14, 1882.

[It is better to shave the combs down as near a straight surface as possible with the uncapping knife; though any of the extractors in general use will throw the honey from crooked or uneven combs when uncapped. The best method we know of to get uniform combs without the use of foundation, is to level the hives perfectly, then use frames with triangular or V shaped top-bars, having the apex or point hang downward; rub comb or beeswax along this lower edge, but not far up on the level or slope, spread the frames evenly in the hive, and as fast as an objectionable comb is built out and filled, remove it, extract the honey, and melt up into wax.—Ed.]

Fall and Spring Record.—I have bees prepared in four different ways for wintering on the summer stands. I made a record of the condition of each colony Oct. 28, since which time they have not been disturbed. This record is very minute in detail. I shall make a like record in the spring, and I will then send it for publication. My idea is that some might draw conclusions that would benefit them.

Henry Jones.
Chesaning, Mich., Jan. 27, 1882.

Cotton Frauds.—On page 40 of the Bee Journal for this year, Mr. R. E. Holmes comes to the defense of Mrs. Cotton, and among other things says: "I do claim that since the business has been done in Mrs. Cotton's name, that it has been done straight." I would ask Mr. Holmes if he regards the transaction described by Mr. Fletcher in the preceding article, "straight." To be sure he received something for his money, but not the goods he ordered as described in her circular. My mother has had an experience with Mrs. Cotton exactly parallel with Mr. F.'s, with the exception that she refused to pay 95 cts. express charges, and the box was sent back to Mrs. C. It was nothing but a small, roughly-made model of a bee hive, not nearly large enough for a hen's nest. The circular which induced my mother to send Mrs. C. $4, is the same as the one quoted by Mr. F. In both cases, instead of sending a "sample hive," as advertised, there was sent a poor model not worth the express charges. Is that fraud? I do not, any more than Mr. Holmes, desire to injure Mrs. C. in "trying to get an honest living," but until she returns the $4 we sent her, and Mr. Holmes reconciles these facts with his statements, I must continue to think her a swindler.

J. W. Merrifield.
Penn Yan, N. Y., Jan. 26, 1882.

Advice Without Reasons.—In the Bee Journal, Mr. Heddon says "I think no sounder advice can ever be given than to say use the standard Langstroth frame." I will say I think there can be no more unsound advice given, than that. There you have Mr. Heddon's say and you have my say. No reasons on either side: which is the heaviest? I think neither is of any more account than a feather in a gale of wind. A man that gives his advice without his reasons, insults (unless the reasons are apparent with the advice, as "I advise you to experiment and learn for yourself") those to whom the advice is given, for he indirectly says I know, you don't. I do not say that is the intent, for I believe Mr. Heddon, and all others that write for the Journal, do so with the desire to benefit its readers. I will state some of the reasons given for using the Langstroth frame, "everybody uses it, everybody admits that it is the handiest frame to use." A. I. Root's reason to me, was, that he must make the hind wheels of wagons track with the fore ones. These are all strong reasons, but they will apply just as well to the use of whisky and tobacco. Some may use the Langstroth frame so long that they get use to it, think it is handy, and perhaps like it. Women may clean up tobacco spit, empty spittoons, help drunken husbands to bed, until they get so used to it that they do not mind it, but I hardly think they get to like it unless they have acquired a taste for the stuff and occasionally find a half emptied bottle or a paper of tobacco and appropriate it.

E. B. Southwick.
Mendon, Mich., Jan. 25, 1882.

Using Old Combs.—I read the Bee Journal and am much pleased with it, especially as it now is a Weekly. I am learning to be a bee-keeper. Have bought 10 colonies of black bees—3 in frame hives and 7 in box hives; aim to transfer the 7 to simplicity hives in the spring. One, however, died from being robbed (by bees) some days ago. The comb is straight, and I have put it away carefully. It is somewhat soiled by a few dead bees and larvæ, and is dark. Will it pay to put it in frames for use, and for what purpose?
J. S. Kerr.
McKinney, Tex., Jan. 15, 1882.

[It will answer to transfer the combs, even though soiled, and put in your stronger colonies to clean up, and will be very useful for either brood-rearing or extracting from.—Ed.]

Bees require Care.—A number of apiarists in our locality have become almost discouraged because of the ill success they attained in wintering their bees during the severe winter of 1880-81. A few of the industrious insects survived the extreme cold, and those that came through in good condition seemed to put forth an extra exertion after the appearance of the sunshine of spring. Because of the excessive flow of nectar and the limited number of colonies, the increase was exceedingly rapid, and the beautiful honey which was stored up during the season of 1881, aroused the enthusiasm and caused the dispirited hopes of some bee-keepers to vanish away, as the mist before the morning sun. By giving the necessary attention to the "little fellows" we shall bring them safely through the present winter, and our watch-word *success* be inscribed on our banners which shall remain "waving" in the balmy breezes so long as we give our "littte pets" the requisite attention.
E. J. Hinshaw.
Lynn, Ind., Jan. 26, 1882.

A Correction.—Besides a few mistakes of minor importance, there is one or two which should not be left incorrect with reference to the report of the Erfurt Convention in Germany. The Convention will meet next year, not in Wiener, Austria, but in Wiener-Newstadt, Austria, Wiener-Newstadt being about an hour's ride from Vienna. Referring to an editorial remark, as quoted from translated report of the proceedings of the Convention, it should not be understood as if German bee-keepers are of the opinion that all or any of the imported American honey contained the germs of foul brood. But they are informed that most or all extracted honey imported from this country, is largely composed of glucose. Many of them having experimented with that stuff to convince themselves it would kill bees and brood, thus furnishing a hot-bed for the disease, or perhaps being the first cause of it. To such importations under the name of honey, they object. And, as they have no means of preventing adulteration of the pure article in this country, they propose to put a heavy duty on everything bearing the name honey. As to the statement of a certain Professor in the Boston *Journal of Chemistry*, I would say that the gentleman is correct in so far, that, after the bees have drawn out thin foundation, the bee-keeper may fill the empty comb with any thing he pleases, and seal it himself too. The *modus operandi* I have known for several years, but, considering there is enough cheating and adulteration going on, as it is, I deem it not advisable to give vent to this invention, though it would be a good thing for some apiarists to know how to seal open honey in the brood chamber in fall.
A. R. Kohnke.
Youngstown, O., Jan. 28, 1882.

From Northern Pennsylvania.—The past honey season was very good in Northern Pennsylvania. I wintered 48 colonies in chaff hives, with a loss of only 5, increased to 93, and took 3,200 lbs. of comb honey, besides some extracted, and expect to take 1,000 lbs. more in the spring, the hives being too full for brood rearing. Bees are wintering splendidly this winter, there being no dead bees and no signs of any disease.
C. J. Haight.
Rush, Pa., Jan. 29, 1882.

The Meloe.—This is mentioned by E. T. Flanagan, on page 53. The "meloe" is not among the honey bees here, but it troubled the bumble bees badly last summer. "Among our foot-prints," as quoted by him, is a solid article; "small" bee-keepers had better read, think, watch "among our foot-prints," and wake up.
W. J. Willard.
Jonesboro, Ill., Jan. 29, 1882.

Recipe for Sticking Labels on Tin Pails.—Take laundry starch, dissolve in a little cold water then add boiling water, or boil the starch until it is as thick as is used in starching clothes. Apply the starch to the back of the label with a flat brush; put the label in place, then smooth the face of the label with the brush and starch, as starch adds looks to the face of the label.
T. S. Bull.
Valparaiso, Ind., Jan. 31, 1882.

Under Sized Bees.—I had a bit of experience last season which was quite novel, and somewhat interesting to me at least, and desire to know if any others have had a similar experience. Seven colonies were put to rearing cells, and given brood from an Italian queen. Strips of comb were used fastened to tins; these, put in frames were all the brood the colonies had. The 9th day, all the frames with cells were introduced to hatchers, with the temperature at 96° to 100°. In 12 days the queen cells begun to hatch at a lively rate; about 15 days afterwards the few worker cells, sealed up while rearing the queen cells, began to hatch. They were one-half the usual size of worker bees, lively, well-marked, and ran about the hatcher 3 or more days before they died. Mr. Quinby thought a high temperature matured the bees early, but will some one of the more scientific bee-keepers tell us why they hatched only one-half the usual size?
W. H. Mallory.
Worcester, N. Y., Jan. 30, 1882.

Blizzards! Whew!—I see G. M. Doolittle reports 18° below zero Jan. 6th. I will report for the information of all winter-packing bee-keepers that we have not had one frost this year, and do not expect any now until next winter. White clover has been in bloom since Jan. 1st, as well as many other things in garden and field. Some trees that were bare of foliage in December, have leaves now as large as one's hand. I send you a bouquet of roses, peas, yellow jasmine, orange, white clover, magnolia, willow, dewberry, and several other blossoms I am not able to name; also grass, sugar-cane, fern leaves; also Japan plums, and mulberry leaves and fruit, with fig leaves as large as your hand, etc. Of course, bees are having a buzzing time of it, carrying in loads of pollen, if not honey, from every opening flower. They generally commence working on white clover here about the 10th of February. Last year clover opened later than usual, and the season proved better than the average.
J. W. Winder.
Thibodeaux, La., Jan. 31, 1882.

[The bouquet came safely to hand, and is a forcible reminder of the magnificent extent of our proud country. While its more northern portions are now (Feb. 4) swept with a frigid temperature and the silvery sleigh bells make continual music; in Louisiana and other southern States the air is redolent with the perfume of fragrant flowers, the busy hum of bees and happy birds making nature joyous; here, though the nights are sharp and frosty, the days are bright with sunshine, and our bees sporting around their hives at mid-day remind us that we, too, have glorious weather to be thankful for. We congratulate our readers at each extreme, but envy neither.—Ed.]

Bingham's Bees.—Yesterday Bingham's bees flew if they pleased. They did not seem to care much for the chance, but a few flew from all the hives. With this evidence that they did not need a fly, I believe there is safety in saying "they will keep." I am glad to see the critics at work. Still I think time is the best critic.
T. F. Bingham.
Abronia, Mich., Jan. 28, 1882.

Report for 1881.—I had 48 colonies in the fall of 1880, and but 7 were left in the spring. I bought 4, making 11 in all. I have obtained from these 1,825 pounds of comb honey, and have extracted 250 lbs. What I have sold, so far, amounts to $266.55.
Francis Cullen.
Mottville, N. Y., Jan. 31, 1882.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

RATES FOR ADVERTISING,

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance :

For **4** weeks		..........**10**	per cent.	discount.
" **8**	"	..........**20**	"	"
" **13**	"	(3 months)....**30**	"	"
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" **39**	"	(9 months)... **50**	"	"
" **52**	"	(1 year) **60**	"	"

Discount, for **1** year, in the Monthly alone, **25** per cent., payable in advance.

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Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

Transient Advertisements payable in advance. —Yearly Contracts payable quarterly, in advance.

THOMAS G. NEWMAN,
974 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

◆

The Apiary Register devotes 2 pages to each colony, ruled and printed, and is so arranged that a single glance will give a complete history of the colony.

For 50 colonies	(120 pages)......	$1 00
" 100 colonies	(220 pages)......	1 50
" 200 colonies	(420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

☞ We will send Cook's Manual bound in cloth, postpaid, and the Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

New Publications.—The following Catalogues and Price Lists for 1882 have been received :

J. T. Wilson, Mortonsville, Ky.
L. E. McFatridge, Carroll, Ind.
Dougherty & McKee, Indianapolis, Ind.
W. P. Henderson, Murfreesboro, Tenn.
U. E. Dodge, Fredonia, N. Y.
F. A. Snell, Milledgeville, Ill.
A. W. Livingston's Sons, Columbus, Ohio.

Mr. H. S. Hackman has sent us the circular of Mrs. Cotton—who bids for "dupes" for the coming season.

The *Kansas Bee-Keeper* for January is received in its new form. It is much improved, and the BEE JOURNAL extends its congratulations to the enterprising publishers.

The *Bee-Keepers' Exchange* for February is also at hand. The new editors seem to be improving, and are making a good paper. They speak thus of the "Apiary Register," a copy of which we sent to the editor of every bee paper :

> This is something new, and fills a needed want in every bee yard. The one we have is calculated for 100 colonies, and is so complete in its systematic and condensed arrangement that the whole story of each is told on one leaf about 4x6 inches—which makes a book for 100 colonies ¾ inch thick. Can be carried in the bee-keepers' pocket without any inconvenience. Thus he can know the exact condition of any colony in a moment. We predict for this book a large sale, as it has only to be seen to be appreciated. We propose to order some at once.

◆

☞ To any one sending a club of two *new* subscribers for 1882, we will present a volume of the BEE JOURNAL for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our *new* subscribers will be pleased to learn that they can get it for $1.00, by sending for it *at once*, before they are all gone.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

CLUBBING LIST FOR 1882.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal, ...	$2 00..	
and Gleanings in Bee-Culture (A. I. Root)	3 00..	2 75
Bee-Keepers' Magazine (A. J. King).	3 00 .	2 60
Bee-Keepers' Instructor (W. Thomas)	2 50..	2 35
The 4 above-named papers.......	4 50..	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A. G. Hill)......	2 50..	2 35
Kansas Bee-Keeper.......	2 60..	2 40
The 7 above-named papers.......	6 30..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) ..	2 40..	2 25
Binder for Weekly, 1881...............	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

☞ We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal for 1882. The next few weeks are the time to do this. We hope every subscriber will do his or her best to double our list for 1882.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

☞ H. A. Burch's residence and nearly all its contents were burned up, Sunday, Jan. 29th. Well insured.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

When you have got an old horse that has passed the market period, apply a bottle of Kendall's Spavin Cure and the result will be marvelous. Read advertisement. 5w4t

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying 22c. per pound, delivered here, Cash on arrival. Shipments solicted.

ALFRED H. NEWMAN,
972 West Madison Street, CHICAGO, ILL.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Feb. 6, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The market has an upward tendency, and I am now paying the following prices in cash: Light comb honey, in single comb sections, 17@21 cents; in larger boxes 2c. less. Extracted, 8@10c.

BEESWAX—Prime quality, 18@22c.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

I pay 8@11c. for extracted honey on arrival, and 16@18c., for choice comb honey.

BEESWAX.—18@22c., on arrival. I have paid 25c. per lb. for choice lots. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb, in 1 to 1½ lb. sections, 20@22c.; same in 2 to 3 lb. boxes, 17@20c.; dark and mixed, in 1 to 3 lb. boxes, 12½@15c. Extracted, white, 10@11c.; dark, 9c.

R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—Buyers are more inclined to operate, but sellers are less anxious. A lot of dark extracted was seeking a buyer a few weeks ago at 8c., but has since been withdrawn, and now for the same lot 8c. is bid.

We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8¾@10c.; dark and candied, 7@8c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

NEW YORK.

HONEY—There is a liberal supply of honey here for which trade is very little demand, and prices rule weak and irregular.

We quote as follows: White comb, in small boxes, 18@19c; dark, in small boxes, 12@14c. Extracted, white, 10@11c.; dark, 7@9c.

BEESWAX.—Prime quality, 21@23c.

THORN & CO., 11 and 13 Devoe avenue.

ST. LOUIS.

HONEY—Plentiful and slow for all save choice bright comb—this sold readily; comb at 18@23c.; strained and extracted 9@11c. to 12½c.—top rates for choice bright in prime packages.

BEESWAX—Steady at 20c. for prime.

R. C. GREER & CO., 117 N. Main Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—The market continues very steady; best white, in 1 and 2 lb. sections, sells quick on arrival at 21c@22c.; No. 2 at 19@20c., but buckwheat honey we find difficult to sell—holding it at 17c. Extracted, is in fair demand at 12c. in small packages, and 11c. in large packages.

BEESWAX—25c., and very scarce.

A. C. KENDEL, 115 Ontario Street.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

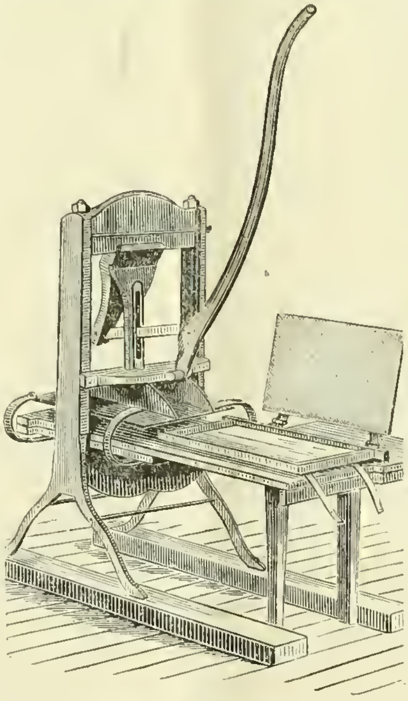
Or they may deduct 10 per cent in cash for their labor in getting up the club.

◆

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

A HAPPY NEW YEAR TO ALL
29th Year. 1882. 29th Year.
CHARLES H. LAKE, Manager.
SECTIONS! Perfection Boxes! HIVES!
ITALIAN BEES.
CHOICE QUEENS.
SEND STAMP FOR CIRCULAR AND PRICE LIST.
SUNNY SIDE APIARY,
259 Greenmount Avenue, Baltimore, Md.

Given's Foundation Press.



The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1wly **D. S. GIVEN & C.**, Hoopeston, Ill.

WANTED **AGENTS** to take orders for the best selling book on **FARM** and **HOME** topics ever published. Sells at sight. Ladies can handle it. Has no superior in any language; 1,050 pages, with nearly 2,000 illustrations. Terms free on application. **50 Per Cent. to Agents**

F. L. HORTON & CO., Pub'rs,
4w5tx **Indianapolis, Ind.**

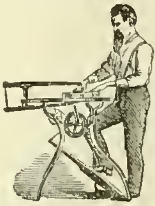
BASSWOOD SEEDLINGS

Four to eight inches, **$1.50 per 100**; three to four feet, **$7.00 per 100.** Address,

Z. K. JEWETT, Nurseryman,
6w8tp **Sparta, Wis.**

BARNES' PATENT

Foot Power Machinery



CIRCULAR AND SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

NOW READY—Foul Brood, its Origin, Development and Cure, by A. R. Kohnke. Sent on receipt of **25c.**, in 3 and 1 cent postage stamps by the author.

7w1t A. R. KOHNKE, Youngstown, O.

20 **CHOICE GREENHOUSE PLANTS for $1.00;** 12 packets flower seeds, 25c. Send for Catalogue. **F. E. FASSETT & BRO., Florists**, Ashtabula, Ohio. 6w1t

THE KANSAS BEE-KEEPER,

Devoted entirely to the best interests of those who keep bees. The question department, conducted by Dr. Wm. R. Howard, is of especial interest to beginners in bee-culture. Jas. Heddon will write a practical article for every number for 1882; 20 pages handsomely gotten up in book form. Every number worth the price of a year's subscription. Sample copies and premium list free to any address. Agents wanted. Address,

SCOVELL & ANDERSON,
28wtf Columbus, Kansas.

American Bee Journal

VOLUME FOR 1880,

Bound in paper covers. A few copies for sale at

$1.00, postpaid to any address.

THOMAS G. NEWMAN,
974 West Madison Street, **Chicago, Ill.**

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
1w1y Hamilton, Hancock Co. Ill.

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen	$4.50
2-frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1..	2.50
" " per half doz., after July 1	13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,
1wtf Burlington, Iowa.

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I have for sale about **300 Colonies** of the

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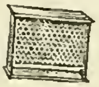

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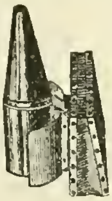

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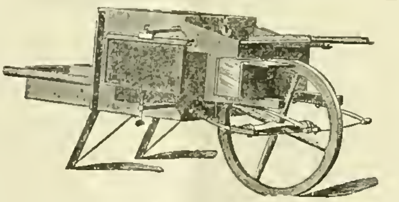

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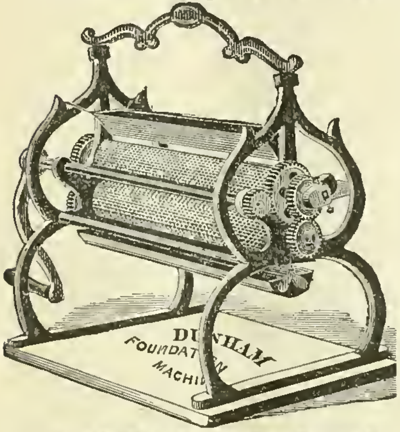

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TOPICS PRESENTED THIS WEEK.

Editorial—

Items....97. 98
Improvement of the Race of Bees.... 97
A Sweet Meeting that Did Not Occur.... 98
Incorporating Bee-Keepers' Societies.... 98
A Correction—Hives.... 98
Horticulture and Bees.... 98
Recipe for Paste.... 98

Among Our Exchanges—

Prepare for Spring Work.... 99
A Cat's Experience with Bees.... 99
Plant for Honey.... 99

Correspondence—

The Longevity of Bees.... 100
My Very Strange Visitor.... 100
Reply to A. R. Kohnke's Review.... 101
Fresh-Made Comb Foundation.... 101
How to Detect Glucose.... 102
Bee-Keeping in Australia.... 102
Mr. A. R. Kohnke and Foul Brood.... 103
Prohibiting Imported Bees.... 104
Potatoes as Bee Enemies.... 104
Does it Pay to Rear Dollar Queens?.... 104
More About the Best Bees.... 105
The Controversy About Pure Bees.... 105

Convention Notes—

Indiana State Convention.... 105
Failures in Apiculture.... 106
Local Convention Directory.... 99

Selections from Our Letter Box—

The Hive for Beginners.... 107
How to Make Paste or Glue with Flour.... 107
Golden Honey Plant.... 107
Bees Doing Well.... 107
Superseding Queens.... 107
Adhesive Paste.... 107
Bees in Satisfactory Condition.... 107
A Query.... 107
Maple and Sorghum Syrups.... 108
Wintering well.... 108
Cellar Wintering with Success.... 108
Honey Granulation.... 108
Buckwheat and Sweet Clover.... 108
Wintering in Cellars.... 108
Reversible Frame Hive.... 108
Every Colony Answered the Roll Call.... 108
Reversible Frames.... 108

Improvement of the Race of Bees.

The principal queen breeders of Italy have addressed a communication to *L'Apicoltore*, the Italian bee paper published at Milan, Italy, in which they discuss the matter of queen rearing, and promise to profit by the addresses of our friend, Mons. Ed. Bertrand, editor of *L'Apiculteur*, published at Nyon, Switzerland, and the editor of the American Bee Journal. We extract the following paragraphs:

"The learned addresses of Messrs. Ed. Bertrand, of Switzerland, and Thomas G. Newman, of America, at the International Apicultural Congress last July, have had a wide publicity through the bee periodicals of Europe, and we desire to practice the recommendations made by these gentlemen at that Congress."

"We heartily endorse the recommendations of Mr. Thos. G. Newman, and assure him that we will give the rearing of queens for exportation to America and elsewhere the greatest of care, and as he advises, we will do all in our power to improve the race of bees, putting into practice the methods advised by our friend in America, but the illustrious ex-president of the North American Bee-Keepers' Society, and honorary member of so many subordinate societies on the other side of the Atlantic, should remember the great extra expense consequent upon an incessant and progressive selection, and we hope that he will be our advocate in America, and inform his countrymen that low prices and the best quality of merchandise are in our case absolutely incompatible."

The communication was signed by Signors Pietro Pilati, Lucio Paglia and Carlo Bianconcini, and indorsed most fully the recommendations and advice we offered to the Congress for the rearing of the best bees. We are fully aware that the last sentence, quoted above, is the key to the situation. To obtain something for nothing has been carried to such a length that it has threatened us with disaster. The very poor policy of getting *cheap* queens, at the expense of quality, has had its day, and now the sober-thinking and wise apiarists are setting their faces against such a dangerous policy.

If we expect to get a queen worth having from Italy, it is in vain to expect it at the price of $3 or $4, to which price they came down in our country last year.

This heap-by-cheap policy is ruinous when applied to any business, and should be discountenanced by bee-keepers generally, as too dangerous in its results to be practiced by them, and wholly incompatible with the idea of improving the race of bees. Who, but a *lunatic*, would think of buying a *cheap* Durham bull, or full blooded horse, or pig, for the purpose of breeding the best stock, horses or swine? and yet it would be just as reasonable as to buy an imported Italian queen for the same purpose for three or four dollars.

We can assure our Italian contemporary and the queen breeders of Italy, that a more reasonable era is dawning upon our people, and hereafter they will buy queens for their merits, and pay fair prices for them, instead of obtaining scrub stock at poverty-stricken prices. We only ask them to apply the most rigid rules of selection and progression, ask a fair price, and breed *the best*.

* * *

☞ The bee-keepers of Philadelphia and vicinity have formed an Association, with Dr. Henry Townsend, President; C. H. Beeler, Jr., Vice President, and F. Hahman, Jr., Secretary. The object of the society is the "promotion of scientific bee-culture, by forming a strong bond of union among the bee-keepers."

A Sweet Meeting that Did Not Occur.

In the Bee Journal for Feb. 1, 1882, we mentioned the fact that a Bee-Keepers' Convention appointed to be held at Berlin, Wis., could not be found by those who were looking for it. We said we knew nothing of the circumstances, but invited the Secretary to "arise and explain." The following explanation is received:

In regard to the meeting of the Northeastern Wisconsin Bee-Keepers' Society, I am the Secretary, and suppose I ought to explain. The Convention in Oshkosh, in Jan., 1881, in view of the small attendance and cold weather, decided to amend the by-laws and hold but one meeting a year, and that in October; but at the meeting in Pewaukee, this was forgotten, and I was prevented from attending, at the last moment, by the illness of my child. Had I been there, the mistake of appointing a meeting in January would not have been made. I wrote to the Secretary *pro tem*, telling him of the change, and asking him to see the different persons who were present, and get their permission to change the meeting to October, but received no answer from him till a few days before the time appointed for the Convention to take place, he having been very busy, and unable to devote the time to it, but said no one would be able to go from that part of the country, or not more than one person. It was too late to postpone the Convention then, and I did not know what to do, not feeling I had any authority in the matter, but I wrote to Mr. Chas. Green, of Berlin, from whom I had received a card a few days before, sending the card to *him and telling him* it would explain the matter. I send you leaf from my letter-copying book with the letter. Mr. Green has undoubtedly explained the matter to the bee-keepers in his vicinity, and I hope there is no harm done, and that the meeting will be held in October in Berlin, Wis.

My regret in the matter is sincere; it was simply impossible for me to leave home, so that I could not be there to explain it myself.

[As we expected, the matter was caused by a train of unavoidable circumstances. Let us hope that a little more care will be exercised, and that hereafter the "sweetness" supposed to be flowing around bee-conventions, may be so definitely located that the "busy bees" will all find it.

* * *

☞ It would save us much trouble, if all would be particular to give their post office address and name, when writing to this office. We have letters (some inclosing money) that have no name, post-office, County or State.—Also, if you live near one postoffice and get your mail at another, be sure to give the address we have on our list.

Incorporating Bee-Keepers' Societies.

Hon. L. Wallbridge, President of the Ontario Bee-Keepers' Society, has our thanks for calling attention to a typographical error in the Bee Journal of Feb. 1st., page 68, where the depth of the Langstroth frame is erroneously given as 7⅞ inches; it should have read 9⅛ inches. The standard Langstroth frame is 9⅛x17⅝ inches, outside. Mr. Wallbridge adds:

I use this hive 12½ inches wide, with 9 frames 9⅞ inches deep. Bees *invariably* (a strong word) leave ⅓ of an inch between combs when they are allowed to choose their own distances. Should not this be the proper space between and at the ends of comb frames, and between the frames and honey boxes? I am now about to make my hives for next year, and wish to be accurate. You will confer a favor on others besides the writer, if you will give your views.

I would ask: Are the bee-keepers' associations in your State incorporated by legislative enactment, or are yours simply voluntary associations? The Ontario bee-keepers desire to be created an incorporation by law. Do you feel the want of being incorporated? I know there are inconveniences attending incorporation which I fear the Ontario bee-keepers do not see. I think we might dispense with it if you do.

After many years of observation and experimental study, three-eighths of an inch has been fixed upon with great unanimity, by experimental bee-keepers, as the proper bee-space. The difference between three-eighths and one-third of an inch is so very slight, however, that but little if any difference will be perceptible in the result.

Our bee-keepers' associations are all voluntary organizations, to join upon the payment of a light membership fee, and withdraw from at will. Holding no realty in common, and transacting no business requiring a seal or bonded officers, no necessity exists for, and no advantage would be gained by being incorporated. If it were intended to transact a general business requiring the acquisition or ownership of real or personal property, or other transactions whereby legal proceedings in law or equity might be resorted to, it would be necessary to file a declaration, take out a charter, and organize under the general law regulating incorporated bodies.

* * *

☞ We will send Cook's Manual bound in cloth, postpaid, and the Weekly Bee Journal for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75.

A Correction.—In the Bee Journal for August 24, 1881, page 270, Mrs. A. M. Sanders gave her report—and about the middle of the letter this sentence occurred: "I had one chaff-hive, but that one did not *lose* a pint of bees; I like those hives," etc. By an oversight our printer thought the word lose was "have" (it looked much like it), and it was so set up and printed. As this completely changed the meaning of the sentence we learn that Mrs. Sanders felt aggrieved and wrote to the maker of that hive complaining of the matter, and intimating that it was purposely done, to injure it, etc. Her letter was a few days since forwarded to us for explanation and correction. We are sorry that the error was not observed and corrected *at once*—but must ask our correspondents NEVER to think for a moment that we intentionally change any idea. Sometimes it is very difficult to read a word and we often change the sentence to make it grammatical, but never knowingly change the idea. And we regret that any one should be ungenerous enough to intimate any such thing.

* * *

Horticulture and Bees.—The Fredonia, N. Y., *Censor*, of Jan. 26, 1882, speaking of the Horticultural Society's meeting at Brocton, says:

An "Improved Bee Feeder" was exhibited by the inventor, U. E. Dodge, of this village, which good judges pronounce of superior merit as it is certainly practical and cheap. Mr. Dodge also had specimens of evaporated apples in boxes with glass sides, which were very perfect.

The way to bring honey to public notice is to lose no opportunity of exhibiting honey, bees, apiarian implements, etc., at fairs and shows of all kinds. Persistent labor will always win. Keep the ball rolling.

* * *

☞ The *California Apiculturist*, is the name of a new bee paper published in Oakland, Cal. It contains 8 pages of the size of the Bee Journal, and is to be published monthly at $1 a year. It is edited by Mr. N. Levering, who is known to our readers as a practical bee-keeper, and it is published by the Apicultural Publishing Co. It is well filled with good reading matter, and we wish it success.

* * *

Recipe for Paste.—To make ordinary flour paste adhere well to tin or glass, add a small quantity of honey or brown sugar—say a tablespoonfull of honey to a pint of paste. Glue size is better than honey for pasting on wood.

Wm. C. Pelham.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Prepare for Spring Work.—Under this caption Wm. M. Kellogg writes thus to the *Prairie Farmer*:

Right now is the time to get ready our season's work in the apiary. By-and-by our bees will be coming out from their winter quarters, and we shall then be so busy attending to their wants that the little items, which have a vast bearing on the success or failure of the honey crop, will be neglected or entirely omitted. And say what we will about the pleasures of bee-keeping, the stubborn facts of the case are, that we are after the dollars and cents of the business, with very few exceptions, and they who expect to make a success of bee-keeping, to get large yields of honey, or increase in swarms, without attending to the little things of the business, need expect naught else but a failure in their efforts. Let us begin now to get our "house in order," these long winter evenings; let us spend a part of the time in discussing what we need to do to help our little pets when the time comes for them to work. Most of us have but little to do during the winter season, and the busiest ones can spare now and then a day to the bees.

Last fall, in the hurry of getting our honey ready for market and the bees packed away nice and snug for winter, many of our tools and fixtures were set to one side, tucked away into the handiest place at hand "for now," meaning to clean them up by-and-by. That by-and-by has come now; here go at it with a vim.

First, that pile of unfinished sections that we extracted the honey from last fall, and put away in a hurry, get them all together and with an old broken stub knife scrape off every bit of propolis, smooth and nice, so that they will go together like new ones without any bother. There, see what a nice lot of them we have, will not the bees fairly laugh to get at them? The mice have got at a few of them, we cut out their nibbling, unless soiled too much, if so, cut out all of it and replace with a good piece of comb foundation.

Now we will estimate about how many cases of sections we will need to use this season, and use our partly-filled sections accordingly. We ought to put in one or two of them to each row of sections to give the bees something to climb up on, which seems to help them very much.

Then there are the honey boards, or cases, to hold the sections on the hive; clean them all up too, then put in the sections, tin separators, and wedge all up firmly, and set upon the shelf ready for use. It is not always best to put on a full complement of sections at the first, so when the time comes we can only put on so many as we judge the colony can take care of.

Now for the hives and extra combs; we look them all over, dig out a mud dauber's nest here, a patch of propolis there, clean them all out. Our frames of empty combs need pruning some, a bit of drone comb here, another spot where the moth may have spoiled it, and fill up the vacancies with a piece of foundation. This work you will need to do in a warm room, for foundation and comb are brittle things in cold weather, but propolis comes off the best where it is cool.

Then there is our old smoker, look how it is "stuck up," not with pride, but honey and soot, do not forget to clean that up too, and set the old shop to rights generally, and we will find plenty to do, I will warrant you.

Now lets see, have we as many sections, and as much comb foundation as we will need this season? I do not believe we have; and now we have been pretty busy and got rather tired, to-night we will write out an order to send off to-morrow to the dealer for the needed supplies. If we order now, he can get our goods ready at his leisure, but after awhile he will be so busy filling orders that we may have to wait, and lose precious time, for when the honey is coming in fast, time is honey and honey is money. "In times of peace prepare for war;" go now, get ye ready for spring work!

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A Cat's Experience with Bees.—The Virgina City, Nevada, *Enterprise*, gives the following amusing anecdote:

Charles Kaisey, who has the only hive of bees in town, says that when he first got his colony his old cat's curiosity was much excited in regard to the doings of the little insects, the like of which she had never before seen. At first she watched their comings and goings at a distance. She then flattened herself on the ground and crept along toward the hive, with tail horizontal and quivering. It was clearly evident that she thought the bees some new kind of game. Finally she took up a position at the entrance to the hive, and when a bee came in or started out, made a dab at it with her paws. This went on for a time without attracting the attention of the inhabitants of the hive. Presently, however, Old Tabby struck and crushed a bee on the edge of the opening to the hive. The smell of the crushed bee alarmed and enraged the whole colony. Bees by the score poured forth and darted into the fur of the astonished cat. Tabby rolled herself in the grass, spitting, spluttering, biting, clawing, and squalling as a cat never squalled before. She appeared a mere ball of fur and bees as she rolled and tumbled about. She was at length hauled away from the hive with a garden rake, at the cost of several stings to her rescuer. Even after she had been taken to a distant part of the grounds the bees stuck to Tabby's fur, and about once in two minutes she would utter an unearthly "yowl!" and bounce a full yard into the air. On coming down she would try to scratch her ear, when a sting on the back would cause her to turn a succession of somersaults, and give vent to a running fire of squalls. Like the parrot that was left alone with the monkey, Old Tabby had a dreadful time. Two or three days after the adventure Tabby was caught by the owner, who took her by the neck and threw her down near the bee hive. No sooner did she strike the ground than she gave a dreadful squall, and at a single bound reached the top of the fence, full six feet in height. There she clung for a moment, with a tail as big as a rolling-pin, when, with another bound and squall, she was out of sight, and did not again put it an appearance for over a week.

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Plant for Honey.—The Chicago *Herald* remarks as follows on this important topic:

Our pleasant and useful cotemporary, the AMERICAN BEE JOURNAL, of this city, is quite emphatic in its recommendation that it is a wise thing to grow both trees and plants which afford a supply of honey for the bees. Among plants it recommends the well-known sweet clover, which will give them continuous pasturage from June until it is too cold for the bees to fly. So far as trees are concerned, there is none of such value as the basswood or linden, though its season is quite short. It is a very beautiful and healthy tree in all parts of the country, and once established is easily grown. We understand that it may be raised from cuttings, though they will require considerable care the first year. The linden is a very beautiful tree, especially when full of fragrant blossoms in early July. The quality of the honey from this tree is very superior, having a flavor almost equal to the wild sage honey of Lower California. Certainly it will pay to grow both trees and plants for honey, and so far as the trees are concerned, the sooner they are planted the better.

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Local Convention Directory.

1882. *Time and Place of Meeting.*

April 11—Eastern Michigan, at Detroit, Mich.
A B. Weed, Sec., Detroit, Mich.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May — —Champlain Valley, at Bristol, Vt.
T. Brookins, Sec.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset. Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

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☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

CORRESPONDENCE

For the American Bee Journal.

The Longevity of Bees.

E. A. THOMAS.

It seems to me that this subject is of vital importance to the successful cultivation of the honey bee, and I wonder that it has not received more attention at the hands of prominent bee-keepers.

Every one has doubtless noticed the difference in the length of life in the human family; how, in some families generation after generation will live to a ripe old age, unless prematurely shortened, while in others each generation grows old much earlier in life, and die of old age at an age when others would be in their prime. You will also notice, in examining the records of families, that the average length of life of each successive generation, many times either increases or diminishes. This has also been noticed in many of the lower animals, and it is only reasonable to suppose that there is also a great difference in the length of insect life.

As there is no effect without a cause, we must endeavor to ascertain the causes which tend to lengthen or shorten the life of *apis melifica*. I have conducted many experiments for the purpose of determining these causes, the result of which I give below:

First, in regard to the longevity of queens, I have found that those reared from the egg live to a greater age, and their offspring are capable of greater endurance and of longer life, than those reared from old larvæ. This is demonstrated by noting the condition of colonies having such queens, at intervals through the season. Those containing queens reared from the egg will be found to steadily increase in numbers until the hives cannot hold their teeming population, while colonies having queens reared from old larvæ, never become very strong even though the hives are crowded at all times with brood. While the latter may increase as rapidly as the former early in the season, they will fall far behind later on, when the places of the fast dying bees must be supplied by the hatching brood. It is reasonable to suppose that a queen reared from the egg will receive a more full and perfect development, than where the development is forced, as is the case with queens reared from old larvæ.

Thus I have found that the longevity of each succeeding generation from any queen can be greatly augmented by breeding from the egg and every queen I rear in future will be bred in this way. By breeding from bees that are long lived, considering both the life of the queen and her offspring, we may greatly improve our bees in this direction. I will speak of the value of long lived race further on.

There are certain unnatural causes which tend to shorten the life of a queen and of her offspring. Queens that are balled and hugged by the bees when introduced, until they have a greasy appearance, will be found to be very short lived. I consider such queens as utterly worthless and destroy them at once. There are other causes which time and space will not permit me to speak of.

Second, the longevity of drones must have more or less influence upon the length of life of the queen's offspring. As we cannot wholly control the mating of our queens, we must depend a good deal upon chance for their mating with long lived drones; but we may considerably lessen the chances of poor mating, by stimulating the colony that produces the finest drones to rear a large number, keeping all others cut off or trapped. It is very difficult to ascertain the age of drones, and almost impossible to determine their average length of life in different colonies. I once induced a colony to retain their drones all the winter, by stimulative feeding, and allowed them to rear none the next spring. In June I found many drones in the hive, which had every appearance of being very aged, and I have no doubt that they were the ones reared in the colony the fall previous. I induced this colony to rear a large number.

Third, the longevity of the workers must depend upon that of the queens and drones. This is a self evident truth, and does not need to be demonstrated by experiments. If we find the workers in a colony very long lived, we must conclude that either the stock from which they sprang or the drone with which the queen mated, or both, were long lived. While we have no means of knowing where the drone came from, we can trace the stock back on the side of the queen, if a careful record has been kept—and here is where the "Apiary Register" proves of value.

If the reader will pardon the digression, I will say here that all who understand the value of a fine strain of bees, and who wish to improve their stock, will do well to send to the Editor of the BEE JOURNAL and get an *Apiary Register*. He has gotten up a neat and well bound book which is cheap at the price, and it should be in the hands of every bee-keeper. In my next article I will give a few hints about keeping the Register, marking the queen, etc.

But to continue: In determining the longevity of bees, you should note their condition in spring; in the case of short lived bees, the colony will dwindle badly in spring; do not understand me to say that all bees that dwindle in spring are short lived, for there are many other causes which produce dwindling. The bee-keeper who is troubled with spring dwindling should investigate the matter, and if he cannot find any abnormal condition of the bees that would cause the trouble, it is safe to conclude that they are short lived or weakly. The remedy is to introduce new blood into the apiary from some long lived race, breed from that stock and keep the drones of the other cut off or trapped.

The importance of this subject must impress itself upon the minds of all after a careful consideration of the question. It is as important in breeding a fine strain of bees to endeavor to augment the longevity of the race, as it is to breed for hardiness. Long lived bees will endure more, and consequently will store more honey in summer; the colonies will throw off larger swarms, which will not dwindle from the effects of hard work before the new brood begins to hatch; and last but not least, they will live long enough in spring to recuperate their strength of numbers, and rear sufficient brood to take their places when they shall "give up the ghost."

I can see a marked improvement in my own bees since I gave attention to this subject, and I am not troubled in the least with spring dwindling or with weak colonies; they always keep strong and vigorous.

Coleraine, Mass.

For the American Bee Journal.

My Very Strange Visitor.

G. M. DOOLITTLE.

A stranger by the name of L. W. Vankirk called, a few days since, to have a friendly chat with Doolittle (see page 63, BEE JOURNAL). As I am always "chatty" the time passed off pleasantly. Upon departing the stranger found Doolittle was more a fact than fiction, for, somehow, Doolittle's talk was of about the same tenor as his articles in the bee papers—thus the stranger was satisfied that a *chat* only developed the truth that Doolittle was the same matter-of-fact man which he had read about. However, I learned some new things which *might* be of *great advantage* to me and as I am always free to give the readers of the BEE JOURNAL all that I learn, I will tell you about it.

Bee-keeping to be *most* profitable should become a "side issue," for in this way with the help of "the girls" and a day spent "now and then," by a busy farmer, $800 can be easily made in a season. Also, if you wish to make a big report, let your bees become weak by keeping them in a cellar ranging from 30° to 35°, cooling them off gradually once or twice a month (many may not wish to try this plan, but my strange friend would) so that you can double them down to a small number. Now, do not feed back any unsalable honey in getting the bees ready winter, nor any of that taken from the nucleus in uniting in the fall, till after all is weighed and thus you can make a big report, and "do one hand's work on the farm" besides.

I had heretofore supposed to make an *honest report* that no honey should be counted but that *actually* sold, but my strange friend has put me on the road, so that I can swell the amount largely; therefore look out for a "magnificient" report next fall.

Then again I learned how to "draw largely on the sugar barrel" and thus get a large return from this, as a part of the side issue. I have used no sugar heretofore, except in the spring of 1878 to keep my bees from starving, so right here I can score another point toward that "grand" report, next fall.

Surely such a "side issue" can be made a great source of wealth, for, if an L. W. Vankirk can make $800. therefrom, by spending a few days' time from his more profitable farm, a specialist who can devote his whole time to the business can make his thousands. I presume we shall hear no more about specialists as honey producers, after this.

Borodino, N. Y.

For the American Bee Journal.

Reply to A. R. Kohnke's Review.

CHAS. F. MUTH.

In reply to Mr. Kohnke's review on page 56 of the BEE JOURNAL, I must say, a review, as the name implies, is the view of a party on a subject of former date. It may show the character of both parties, whether they are practical men, or whether the knowledge of one or the other is merely of a theoretical character.

Nothing improves our knowledge more than a free discussion, and a difference of opinion serves generally to throw light on a subject. I do not often indulge in literary attempts, and when I do, other business does not permit me to dwell too long on any one subject. I must make my articles short, and avoid repeating. For instance, when an article like the above mentioned review requires an answer, I must not postpone it until next day, because by that time, something else is occupying my brains and time, and the reply would never be made.

I have read some bee books and had some practical experience with bees, and whenever I wrote about them, I gave facts as they appeared to me. If I have been wrong at any time, I am willing to be corrected, and if convinced, shall acknowledge it like a man, and no hard feeling will be created thereby against any body.

However, in the "review" of Mr. Kohnke, I fail entirely to see where I have erred, although he counts up "three mistakes," as he states, which sound just as plausible to the uninitiated, as the great discovery of the application of electricity on a swarm of bees, which was published in the BEE JOURNAL in March, 1880.

Mr. Kohnke states that, according to my statement, Hilbert's foul brood recipe was 50 grs. of Salicylic acid, and 400 grs. of pure spirits (or alcohol), which I suppose is correct. If it was not, I suppose he would have given the proper proportions, as he read, like myself, the German bee papers giving the details.

He next says that in 1879, my recipe was 8 grs. of Salicylic acid, 8 grs. of borax, and 1 ounce of water, and that in 1880 I recommended just double that strength, that he waited to see me correct it, and he concludes that I made some grave mistakes, and that he will show that the re-appearance of the disease in my apiary may have been caused by the effect of the medicine—that is rich! If I do not make another grave mistake, Mr. Kohnke has kept 5 colonies of bees during one summer (from spring to fall), while living in the suburbs of our city, and if he ever kept bees before, I was unable to observe it. He was certainly no bee-keeper, and he has kept no bees since, which his last letter tells me. In the meantime, however, he was in some manner connected with Mr. Heddon, who, I venture the assertion, can tell us that Mr. Kohnke is not even able to open a hive of bees like a practical bee-keeper does it. His knowledge is theoretical, and as such is the fact, he should not have overlooked important points, as follows: My remedy to use with the atomizer, was and is now 8 grs. of Salicylic acid, 8 grs. of borax, and 1 ounce of water. But since I have cured the disease by the means of feeding, I have used the medicine of double strength, and one ounce of this mixture is answering for a quart of food. If the mixture were single strength, I should have to use 2 ounces. All of these matters have been duly reported every season, and every other matter of importance that came under my observation. Mr. Kohnke may improve his knowledge by looking that matter up. It is not worth my time to do so.

In my (alleged) mistake No. 2, as he calls it, Mr. Kohnke gives those two mixtures single and double strength, and says: "As Mr. Muth refers to those in his other articles and essays on foul brood, which is the right one? I (Kohnke), answer neither." This leads me to mistake No. 3, etc. This is not rich, but—well, I leave it to the reader to say what it is. Had I as much time to spare as Mr. Kohnke, perhaps I would repeat every time when occasion offers; but, as stated above, whenever I am through with one thing, I have something else to do and think about.

I have nothing to say about the chemical composition of my remedy, but that it is effective and does all I claim for it.

The matter may soon be sifted by parties better posted in chemistry than I am. My druggist, whom Mr. Kohnke, I think, knows, is a good chemist, says that Kohnke's statement is nonsensical.

No beginners should expect to meet with the same success as old hands. But, if anybody fails to cure foul brood when employing my remedy given at our Cincinnati Convention in 1880, and recorded in the BEE JOURNAL, and in my "Practical Hints to Bee-Keepers," it is because only the minority of men are successful in any undertaking. If they would take the same pains I did, they would be more fortunate.

"But," says Mr. Kohnke, "what about the cure he effected? some will ask. I (Kohnke) reply: A cure has never been effected, but Mr. Muth treated his diseased colonies to pure comb or foundation, and pure honey, by which a suppression of the disease has been effected," etc.

This is not rich, either, but it shows plainly that Mr. Kohnke never treated a colony of bees diseased with foul brood, and he, very likely, never saw one. It is, therefore, an assumption, so say the least of it.

There is no better authority than Emil Hilbert, whose articles on foul brood appeared in our German bee papers, and are the basis of my treatment, but which appear to have been carelessly read by Mr. Kohnke, or were misunderstood by him, because of his lack of practical knowledge. I have simplified Hilbert's arrangement very successfully, and I leave it to those who know me if I am guilty of assumption.

I am so little alarmed about the disease that I, last spring, bought out a neighbor's bees affected with foul brood for a number of years, and who used my remedy all along. I had told my old friend that he would not be man enough for the emergency, but he had to satisfy himself first, before he gave up the bees. His 8 colonies were placed in my apiary, and all his goods pertaining to bee-culture which I did not take along were burned before I left the place. Three of the colonies were still affected with the disease and cured during the first few months of spring. From my friend's apiary, very likely, dated a number of occasional cases of foul brood in my apiary, where, however, they could not do much harm, because I know how to cure foul brood, and I am not afraid to prove it.

Cincinnati, O.

For the American Bee Journal.

Fresh-Made Comb Foundation.

J. W. PORTER.

Permit an old friend to congratulate the BEE JOURNAL on its improved appearance. It is becoming more and more valuable, since the change.

I can indorse Mr. Isham's remarks in favor of wood separators for I have long used them. The smoother and harder they are the better, I think. They take up little more room than tin.

As I have seen nothing published in regard to the superior advantages and value of fresh made foundation I wish to ask why it is, for it must have come to the observation of many who are in the habit of using it. To me it seems that freshly made, or at least that which has not been allowed to become hard, is worth very much more, and there are times when I would prefer even to melt into wax that which is hardened by age and pay for fresh foundation. Is not there some way in which seasoned sheets may be made acceptable and pliable? I shall try a warm bath in slightly sweetened water and laying them damp in piles together, and only cut as wanted in the hives. Can any one speak from experience in this matter?

This is a question of great importance, for every one who uses foundation must at times carry over quantities of it. It is, in my opinion, something that has an important bearing upon the tests made as to the relative value of that made from different machines—*its mechanical condition* at the time of insertion. I would call the attention of Mr. Doolittle to this point for his experiments were of great interest.

Last year I tried, side by side, in several different hives, three different kinds made on as many different machines, by well known makers, and invariably found that the sheets that were freshest and most pliable were the best. All I suppose were freshly made but some of it was pressed too hard. Especially I found this the case with the thin "flat bottom." There is no doubt but the chemical condition is affected by the presence of impurities, and over-heating affects the value greatly.

Having used foundation since its first introduction and fully realizing early the importance of its perfection, to honey producers, it is a matter of congratulation that invention has been so active in supplying our needs. Let us have all the light possible. In a suitable temperature sheets can be kept, if closely packed, a long time fresh, but the aim should be to give the most perfect work possible with the least pressure of the sheets. Such is my experience.

Since writing the above, I have a letter from a gentleman, who well deserves the name of bee master, for he last year produced from one colony more than 700 lbs. of honey. He goes so far as to say, that if he had to cut out and melt up starters that had been in the sections two months and put in new in the busiest season, he would do it. Are not others observing a difference of the kind named?

Charlottesville, Va.

For the American Bee Journal.

How to Detect Glucose.

W. C. PRESTON.

Having noticed in your excellent JOURNAL an inquiry for some simple method of detecting glucose, allow me to give your readers the test in common use in chemical laboratories.

The test is sufficiently simple and at the same time very delicate—and may, I think, be stated so plainly that the non-professional reader will find no difficulty in its practical application. It is based on the fact that if to a boiling alkaline solution of blue vitriol a solution containing glucose be added, a red precipitate of cuprous oxide will be immediately thrown down; while cane sugar will give the red precipitate only after protracted boiling. It will be necessary to prepare the following solutions, which may be bottled up and kept for use as required:

1. One-half ounce blue vitriol dissolved in one pint of rain water.
2. Three ounces caustic potassa dissolved in one pint of rain water.

Also procure a test tube about 6 inches long, such as may be found at most any drug store. Pour into this tube about a tablespoonful of the blue vitriol solution and add about an equal amount of the solution of potassa—a light blue precipitate will be formed—now add a small quantity of the sweet substance to be tested (it is better to be in solution), and heat to boiling. If even a trace of glucose is present it will be revealed by the reddish tint immediately imparted to the liquor, best seen by looking down through the tube lengthwise. If there is much glucose a red precipitate will sink to the bottom of the tube.

It may be well to add that this test does not enable us to detect the adulteration of honey by manufactured glucose, inasmuch as all honey contains a large per centage of the same saccharine substance—but pure, as formed in Nature's laboratory—the nectaries of flowers.

State University, Iowa City, Iowa.

For the American Bee Journal.

Bee-Keeping in Australia.

S. MACDONNELL.

DEAR EDITOR.—The notice that appeared in a late number of your JOURNAL regarding the death of the late President Garfield, was one fitting any publication whatever its general object, and as, perhaps, I am the only citizen of this country who writes to the BEE JOURNAL, I shall not like the event to pass without an acknowledgment of the high esteem and respect entertained in all classes here, for one known to us only by his fame and noble character, and of the deep regret which was universally felt at the tragic end of your late President.

My Italian bees have progressed satisfactorily. At one time I was afraid that one colony had sent a swarm to the woods, whereby I should have lost one of my imported queens, but my fears have proved unfounded. I have but little time to try the Kabler or other process for securing the pure impregnation of queens, but have contented myself with giving Italian cells to queenless black colonies, after having removed the queen cells from all their own brood. I have treated about 15 in this manner, and an examination this week found about 12 with yellow queens, some showing an admixture of black. The number of Italian drones which I shall be able to rear next season, and the absence of black drones in my apiary, will, I trust, then give me a better chance of securing pure impregnation for a fresh batch of queens.

An enterprising German bee-keeper lately arrived, and was sent to me by the German Consul for advice. He showed himself to be a thorough master of the science, and I considered his proposal to run a farm of 400 colonies, but, as I was to find all the capital, and he to receive one-half profits, in addition to an allowance of £3 ($15) per week, my estimates showed but a pittance for myself. The hives which he proposed using were to have dovetailed joints, to contain 10 frames, 8 inches wide, 13 deep in brood chamber, and 10 frames half the size in surplus gear, the surplus separated from the brood by excluder-zinc. The hive was to have a door at back, and the frames to hang from a groove into which they slide. The matter, for the reason of cost without adequate returns, has been abandoned by me. I was much amused at his ingenious smoker, consisting of a deep-bowled pipe; the cap fitted with a muzzle, allowing the tobacco smoked to be puffed on to the bees, while the hands were free for operation. How would this suit Mr. Root's "tobacco column?"

I have determined to run a farm of about 100 colonies for a commencement, on a friend's orchard in the vicinity of Parramatta, about 15 miles west of Sydney. Oranges and other fruit trees are largely cultivated there, and in addition, there are many hills and valleys yielding an abundance of our native honey-producing plants. My present stock, at Homebush, where bee fodder is not sufficient to keep more than a small number of colonies, I intend to reserve as a queen breeding station, to supply Italian queens to the farm. Langstroth hives will be adopted throughout. Foreseeing the possibility of the venture assuming larger proportions, in course of time, when it would pay to employ an expert, I should much like to know the rate at which a man able to manage a large bee farm, could be procured from America on a 3 year's engagement, passage paid? Ordinary farm laborers get 25 shillings per week ($6), and find their own board and lodging. Ours is a delightful climate, no winter, and bees thrive amazingly.

I wish you the compliments of the season, and a prosperous year for the AMERICAN BEE JOURNAL.

Sydney, Australia, Dec. 28, 1882.

[It is very doubtful if a skillful apiarist, such as would prove satisfactory and profitable, could be obtained for less than $75 per month, for a three years' engagement. Good apiarists, seeking employment, are exceedingly few.

Accompanying the above communication was the following list of articles exhibited by Mr. MacDonnell, at the Balmain Industrial Exhibition of 1881. As it will interest our readers to learn the progress of bee-keeping in Australia, we give it a place.—ED.]:

1. Diagrams of the Anatomy and Physiology of the Honey Bee—Published by the British Bee-Keepers' Association.
2. Langstroth Frame Hive, containing 3 stories, the first story having 10 frames for brood-rearing, the second having 10 frames for storing honey for extracting, and the third having 18 section boxes, each to hold 2 lbs. of comb honey.
3. Langstroth Single Frame Observatory Hive, allowing the whole economy of the hive to be brought under inspection.
4. Honey Extractor, by the use of which honey is extracted by centrifugal force from the comb, and the comb is returned to the hive, thus enabling

the bees to re-fill the same comb, time after time, without troubling them to build it afresh.

5. Comb Foundation—For compelling the bees to build straight combs for rearing worker bees, and preventing them from rearing drones.
6. Honey Knives, for uncapping frames of sealed honey preparatory to placing them in the extractor.
7. Syringe for washing drone brood out of cells.
8. Queen Cage, for introducing fresh queens into the hives.
9. The Cheshire Bee Trap, enabling bees to leave a box but not to re-enter.
10. Bee Smoker, for puffing small quantities of smoke into hives, whereby the bees, fearing that they are to be driven from their home, are induced to fill their honey sacs with honey; the consequence being that, like a man after a good dinner, they are not inclined to be quarrelsome, and the hive may be opened without fear of the operator being stung.

* * *

For the American Bee Journal.

Mr. A. R. Kohnke and Foul Brood.

D. A. JONES.

In reply to Mr. A. R. Kohnke, on foul brood, page 8 of the BEE JOURNAL for 1882, I would say that I am sorry his cure is too expensive, and requires too much time for me; besides, I do not know of a case of foul brood in Canada now, although I suppose there are some. A bee-keeper, a friend of mine, told me he knew of a case not far from him, which is about 40 miles from me. I told him how to cure it; he promised me to do so, last fall. I suppose he did.

Mr. Kohnke makes a proposition to cure in six weeks; why, bless his soul, I would not give him a cent to fool six weeks with a case of foul brood that can be cured with one or two hours' labor without the use of salicylic acid, or any other medicine. Twenty degrees below zero will not kill foul brood. Take honey from a badly-diseased foul brood colony, mix it with acid as strong as the bees can take it, and feed a clean colony; it will become diseased. The same honey boiled for fifteen minutes may be fed with impunity. But bad foul-broody combs sprayed with acid for days, then soaked in a strong solution of it, completely immersed, when given to a colony starts the disease. I will make the following offer to Mr. K.: if he will bring me a colony of foul brood that I cannot cure with a few minutes or hours of labor, I will give him one hundred dollars for it; I to use no drugs. Or, if he will bring me five very bad foul-broody colonies, and take an equal number himself, equally bad, if I cannot cure mine, without the use of the acid or any drugs, in less time than he can by the use of the acid safely, then I will forfeit five hundred dollars. We have no salicylic acid in Canada that cures foul brood, but we have plenty of men that can do it. But we have no means of curing it without melting up the combs into wax; we return the wax to the bees made into foundation.

At some seasons of the year bees may first be shook into a clean hive, prepared with foundation; combs rendered into wax, honey extracted, boiled and fed back to the colony, and the hive and rack scalded for fifteen minutes. Dr. Duncan, of Embro, Canada, did this last spring (see *Gleanings in Bee-Culture*, page 32 for this year). If bees are removed from the diseased hive and made to consume all the honey in their abdomens before they commence breeding, no disease will appear.

Some recommend burning all. A gentleman in California wrote me some time ago that he had just burned 178 colonies, hives, combs, honey and all. Now this is bee murder, and a useless distruction of property. It reminds me of the bed-bug recipe that was being sold and guaranteed a sure cure. It read as follows: "If your house is infested with bed-bugs, just burn it and it will kill everyone without fail." I used to fear the moth miller more than I now do foul brood. The curing of foul brood is less labor with me than transferring from log-gums, and when I hear of any in this part of Canada, I see that it is cured.

Now some may think from the above that foul brood is not the dangerous disease that it is represented to be, and if they just shake off the bees from the combs of a diseased colony into a clean hive of combs, and whistle Yankee Doodle, that the job is done and the disease is cured. Such, however, is far from being the case. If bees are placed on empty combs immediately from a diseased colony, some will carry their sacs full of the diseased honey and empty it into the cells of the clean combs, then, perhaps, go to the fields, gather more honey, and store it on the top of the diseased honey. Now, that honey might remain there for a long time, but when fed to larvæ it would bring on the disease. The great danger in treating the disease is in bees from clean colonies getting a drop of the affected honey, as all the honey in a diseased hive is affected, and one drop of honey from the affected hive will start it in a clean colony. So all operations should be performed when bees are not flying, or under a wire tent, or some other device that prevents any other bees from getting one drop of the diseased honey. An old saying is, "An ounce of prevention is better than a pound of cure," and this is doubly true in this case, for 100 colonies may all become affected by the careless handling of one colony. When honey is scarce you should make your bee-yard a quarantine as far as possible.

I will give the following mode of curing: Suppose a person has a large apiary affected with the disease, I would first remove all the combs not containing brood, extract the honey and boil it, then it is ready to feed back. Render the combs into wax and make it into foundation; boil the frames 15 minutes, and fill in the foundation again, placing then in clean hives. I next drum and smoke the bees until they all fill themselves with honey (this is very important, for if some are not filled, they will die when others have plenty); then shake off as many bees from the colony as can be spared, always taking the queen from the colony, leaving enough to nurse the brood; place them in a box, cover it with wire cloth, carry it to a dark, cool cellar or bee house, lay it on its side, and allow the bees to remain there from 60 to 80 hours, until you see them beginning to drop down and show signs of starvation; then shake them into the clean hives with foundation, feed them, and put them into a new location at least 1 or 2 miles away from the diseased yard. Queenless colonies will not last as long when left to starve as those with queens, and should be doubled with others, or watched more closely, as they are sometimes so restless that they exhaust their food in 2 days or less. It will not do to put bees in a light, warm place to starve, as some run around and get excited, consuming all the honey in their sacs, and starve, when others more quiet have plenty. A dark, cool, quiet place, where they remain clustered quietly, is the proper place.

It will not do to remove the affected colonies and keep the purified at home, unless they are taken 3 or more miles away, as sometimes bees return to their old location, and might bring the disease with them; while if any of the purified ones return, they remain and are treated with the others again when the brood hatches. As soon as the queen and bees are removed for starving, the hatching brood and bees should be doubled up so as to have all colonies full of combs of hatching brood. The empty hives thus secured should be scalded for future use. As soon as all the brood hatches, the bees may be brushed off the combs after being made to fill themselves with honey, same as the first, placed in some boxes as the first were, and treated in the same way. While they are starving, scald the hives and frames, render the combs into wax, make it into foundation, return it to frames again, place them in the purified hives, and put your starved bees into them again. The honey that was in the combs, of course, should be extracted before cutting the combs out of the frames, and boiled to feed them. Now bring the first lot purified back to the yard again, and you have all your bees and hives purified and free from disease, if you have done it as it should be done, without any loss except your time.

Now, if it is done when there is no brood in the hives, or if you do not care to save the brood, the entire yard can be purified in about 3 days, as you remove all the bees from every hive to starve, while they are starving the hives are boiled, honey extracted and boiled for feeding back, combs rendered into wax, made into foundation, returned to the frames after they are boiled to disinfect them, return the frames with foundation to the purified hives, and the bees when starved may be shaken back in the hives on the original stands, and fed back their purified honey. The honey should be kept at the boiling heat for 15 minutes.

I know of many other plans and ways of doing it, some less trouble and quicker done than the above, but do not wish to give any that could not be carried out by a novice.

There is no more need of losing a colony by foul brood than by queenlessness, and it is so simple and easy to cure when thoroughly understood, that I hope it may be completely wiped out in America. I am sorry to have to trespass so much on your valuable space, but trust there may be no more burning or destroying bees from the above disease.

Beeton, Ont., Canada.

For the American Bee Journal.

Prohibiting Imported Bees.

JULIUS TOMLINSON.

The BEE JOURNAL arrives regular, full of good things. In looking over No. 3, when I came to page 34, I had a hearty laugh over the editorial, in relation to an extract from the Detroit *Evening News*. As I am the Michigan bee-keeper referred to, perhaps I ought to "rise and explain."

There are some things in this State, a little peculiar and different probably from same things in other States: 1st. The *Evening News*, with an immense daily issue, wide awake and enterprising, and which advocates free trade, with a zeal that "no lawyer knows," in which advocacy I am free to say, I heartily concur.

2d. A very worthy Governor, but who lives in Saginaw, and believes that salt, if not king ought to be.

3d. The action of Governor Jerome in appointing delegates to the high tariff convention in New York last autumn; and

4th. The coming State Bee-Keepers' Convention, at Battle Creek.

It was in reference to the above situatien that the following was written, and published in the *Evening News* of same issue, as the extract quoted in the BEE JOURNAL:

"There is to be holden in Battle Creek, Dec. 9th, an important industrial convention. It is the annual meeting of the Michigan Bee-Keepers' Association. The production of honey has become a very important industry, and many thousands of dollars are received annually by the bee-keepers of the State. As this is to be a very important meeting I would respectfully suggest to our most excellent Governor, that he appoint delegates from different parts of the State to attend that Convention.

"I would also remind the Governor that a certain Mr. Jones, of Canada, is largely engaged in bee-keeping, and is selling large numbers of queens to bee-keepers on this side of the line. His queens are very superior stock; they are endorsed and recommended by Prof. Cook and most of our leading bee-keepers. Mr. Jones has spent many thousand dollars to procure this stock. He has himself visited Palestine and Cyprus on purpose to procure superior queen bees. He has also employed Mr. Frank Benton, a citizen of this State, to visit Ceylon and Java, where amid untold perils he searched for that wonder of the insect world, the *Apis dorsata*.

"Now, Mr. Jones, being a foreigner, I would respectfully implore the Governor, in his next message, to recommend that Michigan bee-keepers be protected against these Canadian queens. If it be said that this is no part of the Governor's business, I would say that this is in exact accordance with the Governor's action in other matters. Has he not recently appointed citizens of this State to attend the high tariff convention in New York, and did he not in his first message recommend that Michigan Salt be protected from "the Canadian article?" This is very important and I hope the Governor will seriously consider these matters. Canadian queens should not be tolerated in this State. J. TOMLINSON."

Of course the *News* made a blunder when they talked about the drones being laborers, otherwise I see no great incongruity in the comments of the *News*. Doubtless, if you had had all the points, your editorial would have been somewhat different.

Allegan, Mich.

[The above article has somewhat of a political cast, with which the BEE JOURNAL has nothing to do; but as it is rather necessary to explain the curious article copied from the Detroit *News*, and commented upon on page 34, we give it a place.—ED.]

For the American Bee Journal.

Potatoes as Bee Enemies.

A. R. KOHNKE.

The writer of a prize essay in a German bee paper, attempts to prove that the potato may be considered as a bee enemy. After going into a lengthy discussion of the comparative nutritive value of potatoes and honey, he comes to the conclusion that it would be far more profitable, especially for people being in possession of only a few acres of land, to devote that to the cultivation of honey plants, to the exclusion of potatoes, inasmuch as all available ground is taken up to raise that vegetable, and not a single weed is allowed to grow which might furnish the bees honey.

Though it must be admitted that potatoes are very poor in nutritive qualities and honey rather rich, it would not be good policy for any one having one or two acres, to plant for the bees, and buy his vegetables with the proceeds of his apiary.

The main object of the article above mentioned was to induce bee-keepers to provide a better pasturage for bees. To this fact the bee-keepers in Germany seem to be as alive as some are in this country. Whether it will or will not pay to sow exclusively for bees, I intend to prove myself next summer. Bee-keepers or others who have seeds of supposed honey plants, not for sale anywhere, and have not the time or land for experimenting, may send some to me, free of charge (say enough to cover at least an acre of ground), name of plant and time of bloom should be noted. Results will be reported in due time through the BEE JOURNAL.

Youngstown, O.

For the American Bee Journal.

Does it Pay to Rear Dollar Queens?

REV. A. SALISBURY.

I frequently notice articles in the bee papers stating the profits of rearing and selling untested queens; but these advocates of Dollar Queens present nothing new to inspire the confidence of bee-keepers, of long experience, in their assertions. It may do, where one owns a bee paper in which to do his "puffing," and who buys queens at from 50 cents to $1 and sells them at $1.50; but the one who rears them—does he make money in doing so?

There seem to be many who look upon the proceeds of a queen-rearing apiary as largely profit. But let us see if we cannot do better than to continue to sell fine queens at $1. After awhile we may want something for our labor, besides bare expenses.

Let us examine the matter a little and try to find the profits, if any. We will suppose that an expert can rear, fertilize and sell 500 queens and receive therefor $500. That looks like good pay for 4 month's work; but let us examine further. The expenses for circulars, advertising and correspondence are $90; 500 cages $50; say 50 queens lost in the mails, $50; syrup for feeding 100 nuclei, $100; for feed for colonies after consolidating in the fall, $35; lamp nursery and oil, $7; postage on queens, $10; wages for an expert, at $40 per month, for 4 months, $160. Total, $512, or $12 more than the queens sold for.

In the above I have said nothing about how many good colonies must be robbed of cell builders to rear the 500 queens, for royal cells must be built in good colonies, to produce the best queens. Neither have I taken into account the capital invested in nucleus hives, feeders, etc.; nor the number of queens to be replaced to make all satisfactory when complaints are made; nor have I mentioned the many combs cut up for eggs to rear queens from, for the colonies containing the finest breeding queens get no surplus honey, as they must be handled all the time.

Mr. Hutchinson tells us that a breeder cannot rear "dollar queens" at a profit, if he allows some of his nuclei to stand queenless several days, for lack of queen cells. All, of course, will subscribe to this statement, but all will not agree that they can be reared at a profit when cells are constantly on hand. And more than that, in this latitude, we have, as a rule, about two months in the 4 that the flow of honey is very light, during which time the bees largely refuse to take either a cell or young queen at once, and say by their actions, we prefer to be without a fertile queen 25 or 30 days, rather than to take the strange task you want to impose upon us. And in running 100 nuclei it is out of the question for one hand always to keep them filled with queens against their will. If others can do it, they can do what I never have done, in the past 20 years, and I fear I am too old now to learn that art.

If any should ask why I rear dollar queens, I answer, that the course pursued by others, sometimes leads us to do things we do not approve.

Camargo, Ill.

For the American Bee Journal.

More About the Best Bees.

JAMES HEDDON.

The reason why I am so anxious to get at the cause of bee dysentery, is because I hope that to know the cause will aid in stopping the effect. But in regard to the birth-place of Italians, Cyprians, and Holy Landers, and the number of original rings, these points have as little to do with our success in the pursuit, as a knowledge of the rings of Saturn, and they are of far less interest to me. There is sublimity about the rings of Saturn, but almost a quarrel about the rings of bees. All we need to know is, which are the best bees, and which is the best way to produce better ones. Why then should we spend time theorizing about origin, color, parthenogenesis, and "tweedle-dee and tweedle-dum," when the whole matter is practically one capable of full demonstration.

When we have produced *apis Americana*—that is a fixed type of the best bee on earth—then will be time enough to count the spots and hairs sufficiently to know them wherever seen. When that time comes these bees will sell for their qualities, and the spots will be thrown in.

Mr. Demaree says it was kind in me to try to help Mr. Dadant out of his trouble. That is the first intimation I had that Mr. Dadant was in any trouble. I hardly think anyone except Mr. Demaree has made any such discovery. Perhaps it is so, and it may be quite natural that Mr. Demaree should be the first to discover it. If Mr. Demaree has got him into this trouble, he should have had more respect for age, and priority of position. Mr. Dadant is "old" in the bee business, and especially the importing trade; he has been through these far-off birth-places of our imported stock; he has fooled the best judges and most experienced American apiarists so long, that to trap him now, makes me feel as though the stores of honey we have obtained from bees of his importing and breeding, may be only a myth—a dream!

Mr. Demaree says that in a late article I intimate that the opinion of those who make large reports, is of more worth than those who make small ones, or none at all. Were Mr. Demaree not a lawyer, he would never have thought of borrowing that "none at all" to strengthen his position with. If I have my eye on the remark that Mr. Demaree alludes to, I said substantially this: That a friend got a perfectly enormous yield of honey and increase; that he had been some years breeding a cross between the Italians and Germans to get it with; that he got much of it from red clover; that these "hybrids" stored 40 lbs. of surplus comb honey from red clover alone, when the "golden Italians of the period," did not obtain one pound; that another friend obtained 200 lbs. of surplus comb honey per colony, from 150 colonies, and from some of the best 400 lbs. each; he also had mixed bees of careful breeding. The reason the names of the parties was not given is because they wish it so, to the end that they would not be written to for queens, which they do not have to sell, surplus is their main business. I thought these reports which I knew I could depend on, presented a strong argument of the demonstrative order.

Does Mr. Demaree expect to wash away this proof by giving the credit to location entirely? Suppose the location to be the best this side of the Rocky Mountains (which I know is not the case), would not good bees get such a yield? Mr. Demaree fails to explain why the Italians, of rings and royal pedigree, in this same splendid location got nothing. But I shall not ask him to wade where the water is over his head.

Whether just or not, it is exceedingly handy to cut down the merits of others' successes by saying "grand location," and excuse the failures of your "ringed, striped and speckled" bees by charging it all up to a large honey crop. Upon this very subject, hangs much of our future success or failure.

It seems to me that whoever makes a convert to rings, hairs and down on the hind leg, without practical qualities, does him great harm. For that reason I am earnest in the discussion of the subject. I respect Mr. Demaree's opposite opinions, and admire his vigor of putting them, but I doubt his ever having had the right sort, or right amount of experience in the matter.

Dowagiac, Mich., Feb. 3, 1882.

For the American Bee Journal.

The Controversy about Pure Bees.

CHAS. DADANT.

Mr. Demaree, of Kentucky, says he has overthrown all my arguments. If so, he must have proved the assertion he made, which was the subject of this controversy: that the Cyprian race is gentle and peaceable, and that the dark Italians, which I have imported for 15 years past, are ferocious hybrids. He has also proved (as he says), that the Italian race is not a pure race. If all this is satisfactorily proven, by Mr. Demaree, I will leave the field to the victor, and allow the reader to judge for himself. It were idle to argue with so good a lawyer.

Hamilton, Ill., Feb. 6, 1882.

CONVENTION NOTES

Indiana Bee-Keepers' Convention.

The annual meeting of the Indiana State Bee-Keepers' Association, was held in Indianapolis, Jan. 24. The meeting was called to order with President J. H. Orear in the chair, all the officers being present. But a small amount of routine business was transacted when the meeting adjourned for dinner.

The attendance after dinner was considerably increased by the arrival of belated members.

Shortly after 2 o'clock, Gov. A. G. Porter arrived, and entertained the Society with a very neat address. In the course of his remarks he said:

The value of the honey produced in this State in 1881 is reported by our Bureau of Statistics to have been $207,042. In 1880 the value of this product was $239,525. The reduction of value in 1881 was occasioned by a short production which happened on account of the extreme severity of the winter, which was very destructive to bees, and from the drouth of the summer, which diminished largely the supply of "nectar" from which the honey is produced. This reduction was general throughout the country.

The production of honey is not one of the great industries of the State, though the business when skillfully pursued, is, I am informed, quite a profitable one, and the climate and "pasturage" of the State are favorable to the bee and to a large product from its labor. It will probably not for many years to come be pursued singly, to a large extent, as an industry; but as a by-business of the farm, to amuse the leisure of the farmer's household, and at the same time add to the receipts of the year, it may be largely and most usefully increased. There is nothing about which more has been written than upon the bee and its habits, and the more these are studied the more entertaining and engaging they become.

Aristomachus, we are told, spent 60 years in the study; Lord Brougham, the busiest statesman of his generation, took time to make chemical analyses of the honey comb under various conditions. The interest shown by this Association in bee-culture and in the product of the hive, shows that the industry is likely to excite more and more attention. Like the butter-maker, however, you are met by competition. It takes an extremely delicate palate to distinguish between oleomargarine and any other than the very best quality of butter. Oleomargarine is eaten every day, on perhaps ¼ of the tables in our cities, without a suspicion that it is not butter. The artificial honey is hardly less deceptive, and unless honey is eaten from the comb, there is little assurance to the ordinary palate of its purity. It is said, however, although the bee is now assisted in its work by manufacturing for it the base of the honey comb, that human skill has not reached the point of manufacturing cells which will pass for genuine cells of the comb. So far, your industry is protected from the ingenuity of imposters.

By resolution of Mr. Scholl, a vote of thanks was tendered the Governor for his address, and the interest which he had shown in the Convention.

The larger part of the afternoon was taken up in the discussion of suggestions brought out by the Governor's speech. After the transaction of some unimportant business, it was decided to hold a night session, the meeting adjourning until that time.

Promptly at 7:30 the meeting was called to order, when the President proceeded to deliver his annual address. After reviewing the history and the object of the Society, the President said: "I hold it the duty of every apiarist, young or old, to be always ready when called upon, to give a reason for the hope there is in him. And since I hold myself second to none in fealty and devotion to the cause, I make bold to bring my humble tribute, and lay it beside many brighter garlands on the shrine of our Society. Since our last meeting, many of our brightest hopes and fond anticipations have been blighted. The death angel has been in our way, and many of us who failed to have our hives in proper condition, found in the early spring "*articulo mortis*" written over the doors of many of our most beautiful colonies—even whole apiaries have been depopulated. The complaint is not confined to one locality, but is universal through all the northern states, especially so in the more improved portions of the country. In the unimproved portion, away from large orchards and sorghum factories, they suffered the least. The course of this wide spread disaster should claim our most particular attention at this time, and if there is any way by which we can avoid another visit of this, the worst disaster that has befallen apiculture, we should improve it.

We find that no manner of wintering had anything to do as a preventive, that is so far as packing was concerned, for we find that those who had their bees in the cosiest nooks did not escape, while in some cases those occupying most exposed places came through all right.

While acknowledging that many prominent bee-keepers did not agree with him, the President attributed the principal cause of disaster to allowing the bees to go into winter quarters with uncapped honey, which, by fermentation, is formed into carbonic acid and alcohol. He advised the removal ot this uncapped honey, in his opinion, the rock on which we had stranded.

He said bee-keepers of to-day must improve on what they have learned, be open to conviction, and learn from any and all sources, for it is by gathering a little here and more there that we have arrived at our present state of apicultural knowledge, and by looking back over the past we can see what grand strides we have made in the last few years.

The President's address was discussed at some length.

Mr. C. F. Muth, of Cincinnati, did not believe it necessary to remove the uncapped honey; thought very much more depended on the proper ventilation of the hive. He gave his plan for preparing hives for winter. He removes the second story, Langstroth hives, lays 2 or 3 slats across the frames, under the cloth, to give room for the bees to pass over the top of the frames. On top of the cloth he places a straw mat about one and a half inches thick, a sample of which he had present. On top of this mat he places two additional slats of which he lays the cover of the hive, allowing a free circulation of air between the mat and cover.

The subject of wintering was discussed to a late hour, when the meeting adjourned to the next morning.

The first business on reassembling was the election of officers for the ensuing year. The nominating committee recommended the following names: President, I. A. Cotton, Traders Point, Marion County; Vice President, Jonas Scholl, Lyons Station, Fayette County; Secretary, Frank L. Dougherty, Indianapolis; Treasurer, Mrs. Lizzie Stout, Indianapolis.

There being no other candidates, on motion of Sylvester Johnson, Mr. Davis was instructed to cast the vote of the Convention for said nominees.

On taking the chair, President Cotton made a few pleasant remarks; thought the Association could not do too much in furthering the interests of apiculture. He did not contemplate extensive bee-keeping himself, but was satisfied beyond a doubt that, as Gov. Porter had expressed it, it was a by-business which would pay equally as well, if not better, considering the amount of capital invested, than poultry raising, sheep husbandry, or the various other kinds of by-business, to which the average farmer must resort for success.

The next thing in order being the election of delegates to the National Convention. Messrs. Cotton, Scholl and Dougherty were elected as such delegates, and were instructed to ask the Convention to come to Indianapolis for their next meeting.

Considerable time was given to the subject of the care of honey, especially to extracted honey.

Mr. Muth wished to impress it on the minds of bee-keepers, that honey should be thoroughly ripe before being placed upon the market, that freshly extracted honey should never be closed up, but should stand in open vessels for at least from 4 to 6 weeks, and in a warm place before being closed up.

Other equally important subjects to bee-keepers were discussed at great length, such as "Progressive Bee-Keeping," by Dr. H. Peachee; "Preparing Bees for Winter," by Jonas Scholl; "Wintering Bees," by L. R. Jackson; "Statistical Report," for Spencer County, W. F. Ranzler, all of which were fully commented on.

After returning a vote of thanks to Secretary Herron, of the Board of Agriculture, for favors shown, and to Mr. C. F. Muth, of Cincinnati, for his kind assistance, the Society adjourned subject to the call of the executive for the next annual meeting.—*Indiana Farmer*.

Read before the N. E. Convention.

Failures in Apiculture.

A. J. KING.

Just in proportion that knowledge has increased in relation to any given pursuit, the number of failures have diminished, and the profits increased. But the field of practical knowledge is now so wide, and the number of avocations in which one may engage for a life work are so various, that it is impossible for one mind to master the details of all, or even any considerable portion of them. Yet if what is undertaken is not thoroughly understood and one's knowledge practically applied, mistakes and failures will continually occur, and a business which might have been pleasant and profitable, degenerates into one of hazardous drudgery. In short, one must realize that what is termed "good luck" is only the result of carrying out intelligent plans with a strong heart and willing hands, and that "bad luck" is the reverse of this.

After the general introduction of movable-frame hives in this country, the average of honey production greatly increased. Still, 50 lbs. of surplus honey to the colony was regarded as a wonderful yield. Now, from 100 to 300 lbs. per colony is often realized, and we have instances where 500 and 700 lbs. have been taken. Permit me to predict that the time is not far distant when under a combination of the most favorable circumstances, 1,000 lbs. from a single colony will yet be realized. And I will further state that I believe most of the circumstances themselves will yet be under the control of the apiarist.

Twenty years ago, when the maximum yield was about 50 lbs., many believed that the bee-keeping industry had reached its meridian, and that further substantial advances were impossible. To-day multitudes hold the same opinion regarding our present status. As the former class did not anticipate the scores of new methods and appliances now in use, so the latter see nothing more in the womb of the future to be brought out and developed. It is a well known fact by practical apiarists that the great bulk of honey taken in a season is gathered by the bees in a comparatively brief period, and that if the sources of supply would continue to yield as long as the weather would permit the bees to fly; that the total amount of honey at the close of the season would be more than trebled.

Add to this the significant fact that the cultivation of honey crops is yet in its infancy, that very many plants require for honey secretion very different conditions of the atmosphere and soil, and we have the conditions for a constant honey-flow, for in a large tract covered with these plants of varying dispositions, some would be continually under the proper condition no matter how often the shifting of the weather should occur.

Through the influence of conventions and publications on bee-keeping, the ideas and devices of our best and most experienced apiarists relating to all the different phases of the subject, from the rearing of the bees to the disposition of their products have been widely disseminated, and the causes of failure have been constantly lessening, until now it may be truthfully said that he who embarks in the bee business and fails to realize a fair compensation for the time and capital invested will very generally find the causes of his ill-success within himself. He has most probably gone into the business under the popular delusion that bees not only "work for nothing and board themselves" but they clothe their owner in "purple and fine linen," and enable him to "fare sumptuously every day."

Success is the product of a great many factors in the bee-keeper's arithmetic, multiplication, subtraction and division may be profitably resorted to at times, but if addition (feeding) be neglected, the result will surely reveal neither quotient nor remainder, and the answer of the season will be a product of blasted hopes. Judicious and timely feeding, both stimulative and otherwise, is a positive prerequisite to success, and he who is too lazy or stingy to supply this requirement had better not embark in the business. In short, the man or the woman who expects to realize all the possibilities of fortune in apiculture, must acquire an ardent love for the pursuit, by a faithful and student-like perusal of all the best books and papers devoted to the subject, and this should be supplemented by practical lessons among the bees, involving all the operations referred to in the previous lessons, and this under the eye and supervision of an experienced apiarist.

The intending bee-keeper must realize that he is entering on a pursuit which requires much hard labor, both physical and mental. That to secure the best results he must inwardly digest the fact that if a good workman requires good tools in order to do a well finished job, it is doubly true in regard to himself. That attempting to make his own bee-fixtures, and depending on his agricultural paper for instruction, is but poor economy, if indeed it deserves the name at all. That a month or more spent with a practical and therefore scientific bee-keeper in the busiest part of the season, would be of incalculable benefit to him, even though he pay for the privilege.

Apiarists as a class, are men of large hearts and genuine sympathies, and seldom refuse to advise beginners, if solicited in the proper spirit, but if approached by one who, upon a hasty reading of the "Blessed Bees," or some other fictitious production, has become suddenly wise in his own conceit, he is usually left to find out by a sad experience that a "little knowledge is a dangerous thing," as well in bee-keeping as theology.

New York.

SELECTIONS FROM OUR LETTER BOX

The Hive for Beginners.—Would you advise beginners to use brood frames with close-end top bars instead of open top bars. G. H. D.

[No; we offer no such advice. But few persons approve of such, and many object to them. We advise the use of one of the popular hives, with frames of ordinary size and regular shape. Nearly every beginner, during the first year, fancies he could invent a hive that would "beat the world," but, after more experience, finds one of the standard type of hives to be good enough for him. Beginners should be content to learn from experience of others—to follow and not expect to lead.—Ed.]

How to make Paste or Glue with Flour.—Make a dough with water and flour, then dilute the dough with more water. Use about one tablespoonful of flour for one half glass of water, or a little more. Put on the oven in a tin stew pan, stirring constantly to prevent burning; as soon as it boils it is done. If the labels come off with this glue, they are made with paper too thick. If you want a glue which lasts without rotting, mix in the flour before wetting it, some powdered alum. Chas. Dadant.

Hamilton, Ill., Jan. 31, 1882.

Golden Honey Plant.—I have 8 colonies, some Italians, but mostly blacks; they had two flights in January, and seem to be in good condition. Snow fell last night about 7 inches deep, yet the weather seems warm; about 30 degrees. Some time since I sent Dr. G. L. Tinker, New Philadelphia, O., some seeds of the golden honey plant. The seed he sent back to me were larger than those I sent him, but are the same kind. I find for 2 miles up and down our creek a few stalks of the golden honey plant growing. I observed closely the working of the bees on different kinds of plants, but the golden honey plant seems to have more bees at work than any other. We have some 5 or 6 varieties of golden rod here, but no basswood.

E. M. Coombs.

Memphis, Ind., Jan. 31, 1882.

Bees Doing Well.—In this locality, bees had a good flight on Jan. 27, and Feb. 6. I have 23 colonies; 15 packed on the summer stands; 6 being packed in boxes with chaff and 2 in chaff hives. Norman V. Goodnoe.

North Lansing, Mich., Feb. 7, 1882.

Superseding Queens.—Permit me to ask: 1. Are there any bee-keepers who make a practice of replacing old queens with young ones, for fear the old ones will not live through winter?

2. If so, what disposition do they make of the old ones?

3. Would two years old be the right time to make the change?

4. Would not perforated zinc partitions for confining the queen to a limited portion of the hive, be good for controlling the bees till you wished to divide them? I am thinking of those bee-keepers who have only a few colonies and want to increase, and have not time to wait for natural swarms

Walter Harmer.

Manistee, Mich., Feb. 3, 1882.

[1. Yes; all successful bee-keepers make a practice of superseding old queens in the fall, or during summer when they have good young queens on hand.

2. The old queens are, or should be, destroyed.

3. As a rule, two years is the right age to supersede them, though some are good and prolific the third season.

4. We are not partial to the use of perforated zinc. If the bee-keeper cannot spare time to give his bees close attention, he should divide the colonies when they begin making preparations for swarming. If the frames are uniform, the division can be made about as quickly as the perforated zinc can be applied.—Ed.]

Adhesive Paste.—The *American Cultivator* gives this recipe for such paste as is used on the backs of postage stamps: Dextrine, 2 ounces; acetic acid, 4 drachms; water, 2½ ounces. Mix the dextrine, acetic acid and water, stirring until thoroughly mixed, and add alcohol. For attaching labels to tin, rub the surface with a mixture of muriatic acid and alcohol; apply the label with a thin coating of the paste. J. W. Winder.

Thibodeaux, La.

Bees are in Satisfactory Condition.—The indications this morning were good for a pleasant day, so I thought I would ride down to my apiary for the first time since October. I was taken sick in October, but I am now about as well as ever. I examined every colony, and can say that I have been keeping bees for 14 years and never had them to winter as well and on so little honey as they have this winter. J. T. Wilson.

Mortonsville, Ky., Feb. 6, 1882.

A Query.—Will the Journal please ask Dr. W. R. Howard to tell your thousands of appreciative readers, whether he thinks the Dzierzon theory necessarily follows from the establishment of the much-cherished idea of parthenogenesis?

W. H. Andrews.

McKinney, Tex., Feb. 2, 1882.

Maple and Sorghum Syrups.—Advise through the Bee Journal: 1. Will it do to feed a good quality of maple syrup to bees in the last of February or first of March, when it is known to be pure, having made it myself? 2. Is sorghum fit to feed bees in April, when they can fly every few days? 3. When a person doubles up the bees in the spring, is it best to try and save the surplus queens, or destroy them?

R. P. Williams.

Goldsmith, Ind., Feb. 4, 1882.

[1. Maple syrup will answer when bees are getting occasional flights.

2. If bees are not confined to the hive for long periods, we do not know why a good, or even poor article of sorghum should be more detrimental to their health than fruit and cane juices and timber sap, all of which are more or less consumed by bees when the honey flow is light.

3. By all means destroy them. Most of the queens taken out are in some way defective, or the necessity would not exist for uniting the bees.—Ed.]

Wintering Well.—Bees have wintered nicely so far; they have been flying lively for the last two days. I never saw bees in better condition than they are now; some are breeding. If the good weather continues there will be but little loss this winter. 1. I have 60 brood combs full of honey out of which I would like to take the honey. I have tried it with the extractor, but it breaks the combs. How can I get it out? 2. Will bees make any drone comb if supplied with worker foundation? I am well pleased with the Bee Journal; I could not do without it so long as I keep bees.

H. J. Smith.

Burlington, Wis., Feb. 8, 1882.

[1. Remove the combs with honey to a warm room, and let them get completely warmed through. This toughens the combs and thins the honey, and you will have no trouble in throwing it out while kept in that state.

2. To a great extent drone comb can be restricted by the use of worker foundation; but it is not a positive preventive.—Ed.]

Cellar Wintering With Success.—I commenced the season of 1881 with 28 colonies, only one being a strong colony. They increased to 73; all but one had plenty of good honey to last them till May. They gathered 2,000 lbs. of extracted honey, and 200 lbs. of comb honey. My home market has taken the most of it. I have had no trouble in wintering in the cellar for the last 15 years, when they have had good honey enough to last them through. My cellar is not a dry one, and I have no ventilation, except when the doors are open. We keep our vegetables in the same room with the bees, and have to go down several times a day.

Frank Searles.

Marley, Ill., Feb 7, 1882.

Honey Granulation.—1. Will honey granulate if excluded from the air? I know of one case where extracted honey was put in a glass self-sealing can, and when opened the other day, after standing one year, was in the same condition as when sealed.

2. What causes my bees to be eaten in the hive, the bottom-boards of some hives being covered with the fragments of dead bees?

3. The bees in this vicinity are all blacks; I wish to introduce either the Italian or Cyprian bees next season—which would you advise, and how early can I purchase queens?

A. E. Fish.

North Hatley, Quebec, Feb. 2, 1882.

[1. Ordinarily, honey will granulate if chilled, even though excluded from the air.

2. The bees you suppose to have been eaten, are those which have decomposed from the action of moisture, leaving the harder portions, such as the part between the wings and the scales of the abdomen, dried up.

3. The relative merits of the Cyprians, as against the Italians, are not yet sufficiently demonstrated to warrant us in recommending their preference. Good queens can be obtained from northern and central breeders in June, and from the south in April and May.—Ed.]

Buckwheat and Sweet Clover.—Will sweet clover do well, sown the last of June with buckwheat, and will it make a good crop of bloom the next year? Will it bloom the next year, if sown in the fall, after buckwheat is harvested? We have plenty of linden here yet, but timber is scarce and it is used very fast for fuel. Bee-keeepers will have to plant to fill its place.

E. Doty,

Macksburg, Iowa, Feb. 1, 1882.

[We think it will do to sow sweet clover with buckwheat in June, and with satisfactory results in bloom, much more so than if sown in the fall when buckwheat is harvested.—Ed.]

Wintering in Cellar.—Last Tuesday the thermometer registered 22° below zero. Bees are in excellent condition, the temperature in the cellar has not varied much since they were put in, while outside it has ranged from 60; above to 22° below zero. That is the right kind of a cellar to winter bees in. We expect that every colony will not only come out alive, but strong.

E. A. Thomas.

Coleraine, Mass., Feb. 1, 1882.

Reversible Frame Hives.—I cannot do without the Bee Journal; can hardly wait after I read one number, until the next arrives. The present size suits me 75 per cent. better than volume 17, because if bound, will make it handy to handle. My bees are in splendid condition. They have had, up to this, a fly once in 8 or 9 days. If the weather continues as it has been so far, I expect to have strong colonies by May 1st, ready for work. In the Journal, Vol. 18, No. 3, page 39, Mr. W. T. Stewart, of Eminence, Ky., mentions his reversible frame hive. I read it with interest and like the idea. Please give a description in detail in the Bee Journal. Has he them for sale, or is it patented?

John W. Sturwold.

Haymond, Ind., Feb. 3, 1882.

Reversible Frames.—In the Bee Journal of Jan. 18, 1882, I find an article by Mr. W. T. Stewart on the coming bee hive, and the advantages of a reversible frame. I am pleased to see the matter of reversible frames discussed. More than two years ago I became convinced a frame of that description would possess decided advantages over the ordinary frame, and after much thought on the subject invented metal corners for my frames which would admit of their being reversed at pleasure. A description of my metal corners was published in the Bee Journal of March, 1881. I was not aware there was a reversible frame in use similar to my own, but inferred from the remarks of Dr. L. C. Whiting in the Bee Journal, of Dec. 21, 1881, on the Van Deusen reversible frame, that it was similar. I have been awaiting a description from Mr. Van Deusen of his hive in response to the Doctor's call, and hope he will give a description of it in the Bee Journal. As Mr. Stewart claims a reversible frame hive of his own invention which he thinks totally eclipses Mr. Van Deusen's, I think a description of it would also be appreciated by all advocates of the reversible frame hive.

W. B. Anderson, M. D.

Bloomingdale, Mich.

[We believe Mr. Stewart intends to patent it, and will, of course, have it for sale in due time.—Ed.]

Every Colony Answered the Roll Call.—Yesterday we had a beautiful and warm day, and the bees had a good fly. Every one of my 147 colonies answered the roll call, and I am happy as a lark. I expect a lively time of it next season. The money I pay the Bee Journal for advertising is, I think, well spent. It must have a large number of subscribers, for within one week after my advertisement first appeared in it, I received quite a number of orders, where the parties said: "as per advertisement in Bee Journal.

I. R. Good.

Nappanee, Ind., Feb. 9, 1882.

* * *

☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. Demaree, *Sec.*

Christiansburg, Ky.

* * *

☞ The Texas State Bee-Keepers' Convention will be held at McKinney, Texas, on Tuesday, April 25, 1882.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

RATES FOR ADVERTISING,

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance:

For **4** weeks		**10**	per cent. discount.
" **8** "		**20**	" "
" **13** "	(3 months)	**30**	" "
" **26** "	(6 months)	**40**	" "
" **39** "	(9 months)	**50**	" "
" **52** "	(1 year)	**60**	" "

Disconnt, for **1** year, in the Monthly alone, **25** per cent., **6** months, **10** per cent.

Discount, for **1** year, in tho Semi-Monthly alone, **40** per cent., **6** months, **20** per cent,

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

Transient Advertisements payable in advance. —Yearly Contracts payable quarterly, in advance.

THOMAS G. NEWMAN,

974 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

◆

The Apiary Register devotes 2 pages to each colony, ruled and printed, and is so arranged that a single glance will give a complete history of the colony.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

A Sample Copy of the Weekly Bee Journal will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

New Publications.

The *Oriental Casket*, is the title of a new literary monthly, of which we have received two numbers. It is elegantly printed on fine paper, and devoted to literature and science. It is published at $2 a year, at 912 Arch st., Philadelphia, Pa., by L. Lum Smith, and edited by Emerson Bennett. Those who want a literary *gem* should send for the *Oriental Casket*.

The *British Bee-Keeper's Guide Book*, is the title of a manual of 136 pages, by Thos. Wm. Cowan, Esq., the Chairman of the British Bee-Keepers' Association. As the author of this little work is one of the most progressive among the English apiarists, of course it is a valuable and yet simple manual, and will do a vast amount of good in the way of disseminating light on rational bee-culture in Great Britain. We acknowledge the receipt of a copy of the second edition, sent to us "with the author's compliments." It is nicely printed and fully illustrated; all the newest American inventions are given a prominent place and thorough description and approval. Price 1*s.* 6*d.*

"Rational Apiculture;" the habits of the bees, fertilization of queens, etc. This is the title of a new work of 110 pages, translated from the Italian into French, by M. L. Gorlier, and published by the Apicultural Society of Somme, France. We are in receipt of a copy of the above mentioned work. It is a critical examination of the theory of parthenogenesis of bees, by L'Abbe Giotto Ulivi, of Tuscany, a province of Italy.

Mr. J. A. Everitt, Seedsman, of Watsontown, Pa., met with a serious loss on the night of Jan. 25, by having his entire edition of catalogues, together with all the plates, elecrotypes, etc., destroyed by fire. The catalogues were almost completed at the time. Mr. Everitt will have another edition ready soon, which is to be more elegant than any before published. Send for it.

We have received new Catalogues and Price Lists of Apiarian Supplies from

Dr. J. P. H. Brown, Augusta, Ga.
J. A. Hopkins, South Oxford, N. Y.
A. E. Manum, Bristol, Vt.
Dr. Nugent, Strathroy, Ont.

Elwanger & Barry's Catalogue of Fruit Trees, Shrubs, Roses, etc., is received, from Rochester, N. Y.

CLUBBING LIST FOR 1882.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal	$2 00	
and Gleanings in Bee-Culture (A. I. Root)	3 00	2 75
Bee-Keepers' Magazine (A. J. King)	3 00	2 60
Bee-Keepers' Instructor (W. Thomas)	2 50	2 35
The 4 above-named papers	4 50	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00	2 80
Bee-Keepers' Guide (A. G. Hill)	2 50	2 35
Kansas Bee-Keeper	2 60	2 40
The 7 above-named papers	6 30	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Mannal (bound in cloth)	3 25	3 00
Bees and Honey, (T. G. Newman)	2 40	2 25
Binder for Weekly, 1881	2 85	2 75
Binder for Weekly for 1882	2 75	2 50

☞ O. H. Townsend has moved from Hubbardston to Kalamazoo, Mich.—the latter now being his address.

◆

☞ We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the Bee Journal for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the Journal as fast as received. They will be sent post paid by mail for 75 cents.

◆

☞ To any one sending two *new* Weekly subscribers for a year, we will present a volume of the Bee Journal for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our *new* subscribers will be pleased to learn that they can get it for $1.00, by sending for it *at once*, before they are all gone.

◆

Advertisements intended for the Bee Journal must reach this office by Saturday of the previous week.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

When you have got an old horse that has passed the market period, apply a bottle of Kendall's Spavin Cure and the result will be marvelous. Read advertisement. 5w4t

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Feb. 13, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The market has an upward tendency, and I am now paying the following prices in cash: Light comb honey, in single comb sections, 17@21 cents; in larger boxes 2c. less. Extracted, 8@10c.

BEESWAX—Prime quality, 18@22c.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

I pay 8@11c. for extracted honey on arrival, and 16@18c., for choice comb honey.

BEESWAX.—18@22c., on arrival. I have paid 25c. per lb. for choice lots. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb, in 1 to 1½ lb. sections, 20@22c.; same in 2 to 3 lb. boxes, 17@20c.; dark and mixed, in 1 to 3 lb. boxes, 12½@15c. Extracted, white, 10@11c.; dark, 9c.

R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—Quiet; no change.

We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8¾@10c.; dark and candied, 7@8c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

NEW YORK.

HONEY—There is a liberal supply of honey here for which trade is very little demand, and prices rule weak and irregular.

We quote as follows: White comb, in small boxes, 18@19c; dark, in small boxes, 12@14c. Extracted, white, 10@11c.; dark, 7@9c.

BEESWAX.—Prime quality, 21@23c.

THORN & Co., 11 and 13 Devoe avenue.

ST. LOUIS.

HONEY—Quiet and slow for all save choice bright comb—this sold readily; comb at 18@23c.; strained and extracted 9@11c. to 12½c.—top rates for choice bright in prime packages.

BEESWAX—Steady at 20@21c. for prime.

R. C. GREER & Co., 117 N. Main Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—The market continues very steady; best white, in 1 and 2 lb. sections, sells quick on arrival at 21c@22c.; No. 2 at 19@20c., but buckwheat honey we find difficult to sell—holding it at 17c. Extracted, is in fair demand at 12c. in small packages, and 11c. in large packages.

BEESWAX—25c., and very scarce.

A. C. KENDEL, 115 Ontario Street.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

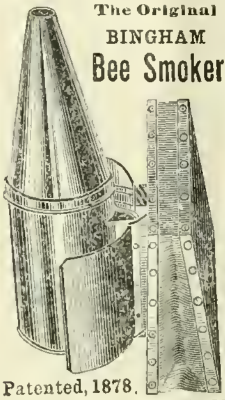
Or they may deduct 10 per cent in cash for their labor in getting up the club.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.



Patented, 1878.

The Original BINGHAM Bee Smoker

YES, SIR;

The only inventors ever elected Honorary Members of the North American Bee-Keepers' Society for their inventions were the Rev. L. L. Langstroth, movable comb hive; Frances Dunham, comb foundation; T. F. Bingham, bee smoker.

The North American Bee-Keepers' Society of 1881, and the Michigan State Bee-Keepers' Society of 1881, recommended only Bingham Smokers and Bingham & Hetherington Uncapping Knives.

Our patents cover all the Smokers that burn sound stove-wood, or do not go out. If you buy our Implements first you will have to buy no others.

PRICES:

	Handed to Customer.	By Mail, Postpaid.
Large Bingham Smoker (wide shield), 2½ inch	$1 50	$1 75
Extra Bingham Smoker (wide shield), 2 inch	1 25	1 50
Plain Bingham Smoker, 2 inch	1 00	1 25
Little Wonder Bingham Smoker, 1¾ inch	75	65
Bingham & Hetherington Honey Knife, 2 inch	1 25	1 40

To sell again, apply for dozen or half-dozen rates. Address,

T. F. BINGHAM, or
BINGHAM & HETHERINGTON,
7wtf **Abronia, Mich.**

G. M. DOOLITTLE SAYS:

Stanley's Vandervort Foundation

for sections is "**even thinner than natural comb, and is the very best foundation made.**" See BEE JOURNAL of Jan. 3, and *Gleanings* for Jan., pages 14, 15. We also make high-walled Vandervort foundation for brood chamber to fit any size frame. Send for samples and prices, or send $10 for 20 lbs. 10 sq. ft. per lb.,

STANLEYS' VANDERVORT FOUNDATION.

We are making foundation for use in section boxes with very thin base and high, sharp, side-wall, for 2c. per lb. less than thin foundation, 10 sq. feet per lb. Our wax is beautiful, and our foundation is just what you want. Send 3-cent stamp for samples of our three kinds of Vandervort foundation.

7w1t G. W. STANLEY & BRO., Wyoming, N. Y.

Homes in Tennessee.

The KNOXVILLE TRIBUNE is a medium through which parties coming to Tennessee can obtain information of value in regard to climate, resources, productions, prices of land, and other points of interest to the stranger.

Inquiries about Tennessee answered by letter or through the paper, as requested. Address

THE TRIBUNE,
7w4tx **Knoxville, Tenn.**

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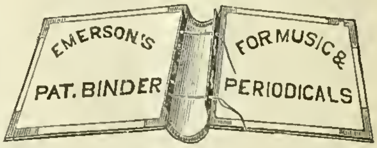

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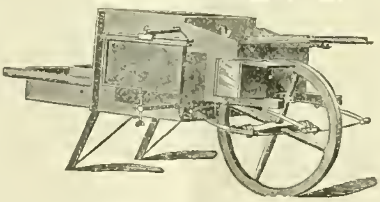

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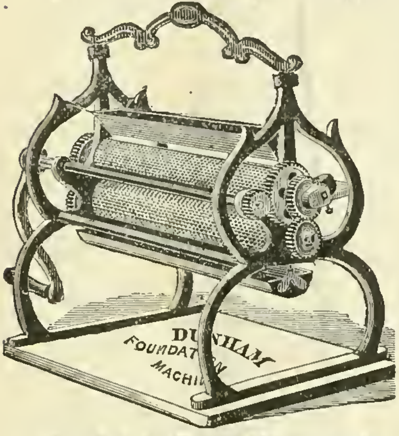

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TOPICS PRESENTED THIS WEEK.

Editorial—

Sweet Clover for the South 113
Fastening Foundation in Frames.......... 114
Syrian Bees.. 114
Mild Winter in Europe......................... 114
Items.. 115
Catalogues 115
Foul Brood ; its Origin, Development and Cure 115
Goodrich's Foundation Fastener 115
Local Convention Directory................. 115

Among Our Exchanges—

Encouraging Outlook......................... 115
Introduction of Bees Into America........ 115

Convention Notes—

Nebraska State Convention 116
Prevention of Swarming...................... 116

Correspondence—

The New Races of Bees...................... 117
The Best Bees Controversy................. 118
How to Use the Apiary Register........... 118
Foundation for Surplus....................... 119
Section Honey Boxes......................... 119
Wired Comb Foundation..................... 120
The Theory of Parthenogenesis........... 120
Wooden Separators for Sections.......... 121
Plan for Wintering Bees...................... 121
Location an Important Matter.............. 121

Selections from Our Letter Box—

Much Honey Consumed 122
Bacterium 122
Bees Wintering in First Rate Order....... 122
Better than Ever................................. 122
Tin Numbers for Hives........................ 122
Doing Nicely 122
N. E. Wisconsin Convention................ 122
The Lewis Section 123
Irregular Combs 123
An Excellent Report........................... 123
Will Air-Tight Jars Prevent Candying ?.. 123
What was it ?..................................... 123
Bees in the Cellar Doing Well.............. 123
Climbers for Shade 123
All Right, so far.................................. 123
Recipe for Making Paste...................... 123
Bees have had Frequent Flights........... 124
Bees Doing Well................................. 124
Prospects Brighter............................. 124
Cold 124
The Langstroth Hive........................... 124
Wintering Well in Chaff........................ 124
Packed in Chaff.................................. 124
Spring-Like.. 124
Dairy *vs.* Apiary.................................. 124
Bee-Keeping in Georgia 124
Mild Winter 124
Bee-Keeping in Utah........................... 124
Young Bees.. 124

Sweet Clover for the South.

We are more than pleased to observe the deep interest awakening in regard to planting to secure a continuous honey flow, and the general favor which the much abused, but very worthy, sweet clover (*Melilotus alba*) is gaining. Mr. J. L. Edwards, of Wadesboro, N. C., in a letter dated Feb. 6, 1882, writes as follows:

> I have had poor success with bees, owing to the fact that there are but few honey-producing plants or trees on my plantation, or in my section of the country; but your remarks on sweet clover, in the BEE JOURNAL for Jan. 11, encourages me to give it a trial; I am anxious to raise enough honey for my own family. Now, I wish to know if sweet clover will do well as far South as this—latitude 33°? If it will make good hay and pasture, I will plant it instead of red clover. What kind of land does it grow best on? I have about 50 acres of creek bottom, part sandy loam and a part clay loam; I have also a variety of uplands, sandy, clay and gravelly. Some of my bottoms are too wet for red clover, some are too sandy; all of my uplands are too dry for red clover to stand our long hot summers. Please answer the above questions, and give me all the information you can. I feel deeply interested in sweet clover. Hay is worth $25.00 a ton with us, and if sweet clover will succeed here, as well as it does in the Northern States, I will go into it quite extensively.

Try the sweet clover on your bottom lands, especially on the sand and clay loams; also on the uplands. It will stand any amount of water, and on gravel soil the tap-root will run down till it finds moisture. Your climate, we think, is well adapted for its growth, as it will withstand any degree of summer heat or winter cold, and its deep-penetrating, wide-spreading roots, admirably adapt it to any variety of soil, whether wet or dry, sand or clay, loam or gravel. Being remarkably thrifty in growth, it will be found equal to red clover for soiling, and can be successfully grown in localities where the latter will prove a failure. Prof. C. E. Thorne, of the Ohio State University, thus testifies regarding its value as a field plant: "It will grow quite luxuriantly in hard, poor clay, where even white clover will scarcely live at all, and grows much more rapidly than red clover in any soil, while in the soils that are, as is said, 'clover-sick,' it thrives as well as anywhere. It is a good forage plant for bees and for cattle, and is well adapted for soiling, as it makes a growth of 4 to 6 feet during the season, and is said to bear 2 or 3 cuttings. A German analysis gives its hay a feeding value of $15 per ton as against $16.28 for very good red clover hay. While red clover, upon which our farming in many sections, and especially in clay lands, depends so essentially for crops of grain, is becoming more and more uncertain. It would seem to be worth while to try this 'fast weed' as a resource for recuperative green manuring, in heavy soils especially."

But its greatest recommendation for the general bee-keeper is the fact that it requires no especial cultivation, thus making it especially desirable for roadsides and commons. Being a biennial, the seeds possess great vitality, and may be kept over for a long time, and scattered a handful at a time, as opportunity offers, or a bare place developes itself.

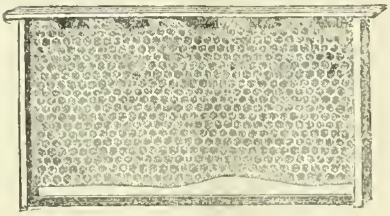
☞ Mr. Vennor says: "We are going to have a very stormy and cold March in western and southwestern sections chiefly." But he has signally failed in his prognostigations for December and January, for this locality.

Fastening Foundation in Frames.

Mr. S. F. Miller, of North Manchester, Ind., addressed us for a method of increasing by dividing, which was published in the Bee Journal, together with instructions for doing so successfully. The following letter from him gives the result of his practice:

In the Bee Journal for 1881, page 100, you instructed me how to increase by dividing, in answer to a letter on that subject, and I will now report my success. I had two colonies, one of 6 frames and the other of 7, but I had so little experience I did not know the difference between nuclei and full colonies. First, I had to build the two up to strong colonies, and then I followed your instructions for increasing, and now have 7 colonies in excellent condition. To-day they had an excellent flight, and made everything hum. They have plenty of honey. Now, did I not do well for a beginner? I had only a plug-hat full of bees and 2 queens, to commence with. I must express my gratitude for that editorial instructing me and thousands of others, and which I shall forever deem as the foundation of my success. I suppose I must go ahead this spring and increase on the same plan, as before, only that I must use foundation instead of old combs, as I have none. I do not rightly understand Prof. Cook, in his "Manual," how to fasten foundation in the frames. I have never seen any foundation. I use the standard Langstroth hive. All I know about bees is what I have learned from the Bee Journal. I have a good chance for success. This is a good location for honey, and very few bees. Which do you think the best, the 8, 9 or 10 frame Langstroth? Mr. J. T. Smith, on page 74, thanks Mrs. A. M. Sanders for her recipe for making honey pop-corn balls. Why not publish the recipe for us in the Bee Journal?

If you intend running for increase this season, then adopt the same course you did the last. There are several methods of fastening comb foundation in frames, as follows: If you use flat top-bars, then double over about one-fourth of an inch along the upper edge of the sheet, with a blunt knife press this lapped portion firmly along the under side of the bar, so the sheet will hang from the center. A machine has recently been invented for the purpose of rapidly fastening foundation in frames, where flat top-bars are used, and for firmly fastening thin foundation in the section boxes. Many use wax and rosin melted together, and glue the foundation on. If you use a top-bar with an inset strip (as many do), you can easily press the foundation to the strip, without the use of melted wax and rosin. If a triangular or V-shaped top-bar be used, then cut four slits at equal distances along one edge of the foundation, one-half an inch deep—this will give five sub-divisions of the edge—now press up the center and two end portions of the edge, and bend down the other two; lay down the sheet on a table, place the frame with the lower sharp edge of the top to the sheet, and press, with the fingers or a blunt knife, the foundation on the top-bar. These flaps will alternate on each side of the top-bar, and the foundation will hang from the center.



Triangular Top-Bar with Foundation.

We prefer the standard Langstroth hive, holding 10 frames. Sometimes a good queen will nearly occupy 10 frames in brood-rearing, and then they are invaluable in strengthening up the weaker colonies. They are also very desirable, as giving the largest surface for section boxes to be placed on top. Should an especial occasion demand less room, or a necessity arise for contracting the brood chamber in order to drive the bees into the supers, it is an easy matter to lift out a frame or two, and insert a division-board at the side. We think a queen is not so liable to take advantage of a slight cessation in the honey flow, and cease laying, where there are ten frames and the consequent more or less honey around the edges, as where there are fewer frames. We are aware there are several practical bee-keepers who differ with us regarding the style of hive, as well as the number of frames; but our correspondent asks which *we* think the best.

The recipe for making honey pop-corn balls, to which reference is made, was published in the Bee Journal of Jan. 4, on page 12.

* * *

Syrian Bees.—Please say through Bee Journal who is a reliable person to procure a colony of pure Syrian bees from. L. G. Halley.
New Hamburg, Canada, Feb. 10, '82.

By consulting our advertising columns you will see who have bees for sale. We think they are all reliable persons.

Mild Winter in Europe.

Not only has the present winter been an unusually mild and pleasant one in most portions of the United States, but in Europe they have been similarly blessed. The following letter from Mr. J. D. Hutchison, Glasgow, Scotland, breathes of encouragement:

As proof of the mild weather which we have enjoyed in this country during the winter, I may mention that a gentleman in Dundee, on looking over his apiary a few days ago, found that 5 of his colonies had a large amount of brood in all stages. He was fortunate in procuring a colony of hybrids about 3 years ago, which were then distributed through most of his other hives, and have much improved the working power of the bees. In 1880 this hybrid colony gave 3 swarms, and from the 4 he had over 150 lbs. of fine comb honey, besides leaving his bees sufficient winter stores.

The flowers which have been grown here in the open air are beginning to bud, and in some places full-blown flowers can be had. Butterflies, etc., have been seen several times of late.

The Caledonian Apiarian Society has had no meeting yet this year, but I expect one will be held at an early date to make arrangements for the annual exhibition, which takes place in Glasgow next July, and which I think will be the largest held as yet.

By the above, it will be seen that 150 pounds of fine comb honey, from four colonies, is regarded as an extraordinary yield, and to be accomplished only by bees which have been much improved. We have published several reports, the past season, where whole apiaries in America have given nearly double that amount as an average for each colony, and there are instances on record where triple that amount have been realized from a single colony in one season; and when bee-keepers have fully realized the importance and profitableness of planting bee pastures (which all eventually will), the fabulous *one thousand pounds per colony* may be among the triumphs frequently realized.

The above letter however suggests, or rather, sustains, one most important fact: that, with improved bees, the honey yield is not commensurate with their home demand, except at such exorbitant prices as to make it an extravagant luxury. Those who have bewailed the intelligence disseminated throughout Europe by the Bee Journal and American apicultural books, can learn an important lesson from the letter, and rejoice with the more intelligent that we are rapidly and surely developing an insatiable and remunerative foreign market.

Foul Brood; Its Origin, Development and Cure.—We have received from A. R. Kohnke, Youngstown, O., a copy of his pamphlet bearing the above title. In his preface the author says:

"I have ventured to offer the bee-keeping public a concise method, delineated in these pages, by which they will be enabled successfully to combat this dreadful malady. I have drawn on the experience and experiments of the most noted scientists and apiarists of Germany, such as Professors Kolbe, Cech, Fisher, Preuss and Lamprecht, but especially Hilbert and Schoenfeld, to whom the bee-keeping fraternity of the whole world is indebted for their efforts and final success in curing foul brood, and to whom I offer my sincerest thanks." Price, 25 cents.

Goodrich's Foundation Fastener.—Mr. S. Goodrich, of Urbana, Ill., has recently invented a very ingenious contrivance for fastening foundation securely and rapidly in frames with flat top-bars, and in sections. He has deposited one in the BEE JOURNAL Museum, and explained the manner of using. We will give, next week, a full description of the machine, with a cut, which cannot be engraved in time for this issue.

☞ L'Abbe L. DuBois, President of "the Society d'Apiculteur de la Somme," writes: "The AMERICAN BEE JOURNAL grows better and better every year. It is the first of all French and foreign periodicals that I know of. If I had to choose between them all, I should without hesitancy choose the AMERICAN BEE JOURNAL." This is high endorsement, for l'Abbe L. DuBois is one of the most learned and progressive apiculturists in the World.

☞ An error occurred last week on page 105, 2d column, 3d paragraph, in Mr. Heddon's article. For "honey" substitute the word *hay*. We republish the paragraph properly corrected:

Whether just or not, it is exceedingly handy to cut down the merits of others' successes by saying "grand location," and excuse the failures of your "ringed, striped and speckled" bees by charging it all up to a large *hay* crop. Upon this very subject, hangs much of our future success or failure.

☞ The semi-annual meeting of the Tuscarawas and Muskingum Valley Bee-Keepers' Convention, will be held in the Town Hall at Coshocton, O., on April 19 and 20, commencing at 10 a. m. A cordial invitation is extended to bee-keepers everywhere.

J. A. BUCKLEW, *Sec.*, Clarks, O.

AMONG OUR EXCHANGES

MISCELLANEOUS.

Introduction of Bees Into America.—Mr. J. M. Hicks, in the *Grange Bulletin*, remarks as follows on the subject:

As near as we can learn, bees were introduced into this country in the latter part of the 15th century, by the Puritian fathers. I have often heard my grandfather, Dempsey Hicks, say that his father, James Hicks, who came from England, brought bees with him when he emigrated to this country, then a perfect wilderness, and there were no bees to be found in any part of the country. He also said, that the red men of this country often told him there were no bees to be found in the forest previous to the coming of the pale-faces (meaning the white men).

Encouraging Outlook.—Mrs. L. Harrison, in the *Prairie Farmer*, remarks as follows on the honey prospect:

The last two honey seasons have been partial failures in most localities, and this, together with the unprecedented losses in bees during the winter of 1880-81, has thinned out the ranks of bee-keepers. The faint-hearted fled in disgust, throwing their hives and fixtures to the moles and bats, and crying "humbug" at the top of their voices. The brave buried the dead, and gathered up the remnant of the lost nation and encouraged the mothers in the production of young, furnishing candy for the babies, flour, honey, and "coffee A." Under the fostering care of their owner, each mother did her best, and sent off colonies to occupy the deserted homes of their unfortunate predecessors, until the bee village was again populous. The rearing of so many bees consumed large quantities of honey, consequently little surplus was left, therefore the honey product of 1882 will find very little old honey in the market to come in competition with it.

This winter, so far, has been favorable for bees on their summer stands. January 26th was rainy, but a little past noon the clouds broke away, and the sun shone, the thermometer indicating 64° in the shade. Out rushed the bees from their hives, like pent-up school children at recess, and a merry sport they had. They cleaned house, but carried out few dead; every colony was living and in fine condition.

The skies are brightening for bee-keepers, and the outlook is favorable. Honey will no longer go begging for a market, as the demand for it is constantly increasing. The large crop of 1879, and consequently low price, caused it to be introduced into many families where it had previously been a stranger. Many persons who had formerly been of the opinion that honey disagreed with them, and always made them sick, were tempted, by its low price and beautiful appearance, to partake of it, and were agreeably surprised that no sickness followed the indulgence. They found out that the honey of to-day, produced by scientific bee-culture, is very different from the black mixture of bee-bread, old comb, and honey, formerly offered in the markets.

Local Convention Directory.

1882. *Time and Place of Meeting.*

March 15—New Jersey State, New Brunswick, N. J.

April 11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.

19, 20—Tuscarawas and Muskingum Valley, at Coshocton, O.
J. A. Bucklew, Sec., Clarks, O.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May — —Champlain Valley, at Bristol, Vt.
T. Brookins, Sec.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Catalogues.—We have received new catalogues and price lists from the following persons:

J. H. Robertson, Pewamo, Mich.
L. E. Welch, Linden, Mich.
W. S. Cauthen, Pleasant Hill, S. C.
G. B. Lewis, Watertown, Wis.
Wm. Ballantine & Son, Sago, O.
C. G. Dickinson, South Oxford, N.Y.
W. C. R. Kemp, Orleans, Ind.
S. D. McLean, Columbia, Tenn.

☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

☞ To any one sending two *new* Weekly subscribers for a year, we will present a volume of the BEE JOURNAL for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our *new* subscribers will be pleased to learn that they can get it for $1.00, by sending for it *at once*, before they are all gone.

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

CONVENTION
NOTES

Nebraska State Convention.

The third annual session of the Nebraska State Bee-Keepers' Association, was called to order by the President, Mr. T. L. Vondorn, at Ashland, on Jan. 12, 1882. The minutes of the previous meeting were read and approved.

The Treasurer presented his report, showing the total receipts to be $20.25 and expenditures $11.25, leaving a balance of $9.00 in the treasury. It was accepted and placed on file:

The committee on constitution and by-laws failed to report, owing to the illness of one of the members. A new committee was appointed, consisting of Messrs. Myers, Culbertson and Hildebrant. Vice Presidents and others from the different counties in the State, reported as follows:

Prof. Culbertson, for Lancaster County, reported but a small flow of honey in the middle and southern parts, owing to severe drouths, while in the northern, the yield was much larger, and a greater increase of bees. By request, he gave his last year's experiments in wintering, both out-door and cellar. Those out-doors were placed close together, protected by a shed on the north, and covered with several feet of hay. A cloth was put over the frames, and the story filled with dry cobs. He lost 5 of the 6 treated in this way. He put 21 in the cellar, putting several thicknesses of cotton cloth over the frames, and a paper on top of these, on which he put unslacked lime to absorb all moisture. The back end of the hive was raised higher than the front, that all water might run out. He lost 5 of these.

Mr. Decker, of Wahoo, reported large yields of honey and great increase of bees.

P. P. Hayes started with 1 colony, increased to 5, and obtained 400 lbs. of honey.

Mr. Dodder, of same place, increased from 15 to 60.

Mr. Vondorn, of Omaha, gave report for Douglas, who started with 14 colonies, increased to 41, and got 1,900 lbs. of honey.

Mr. Yager increased from 1 to 8.

J. F. Sawyer from 22 to 60.

Mr. Edwards from 92 to 204, and received 2,000 lbs. of honey; the location was overstocked.

The Secretary gave reports received from Gage, Jefferson, Butler, Hall, and others, which indicated a large yield of honey, and almost unprecedented increase of colonies.

It was moved that a question box be opened, in which any one could put questions they wished discussed. Messrs. Culbertson, Rouse and Trester were appointed a committee to answer the questions.

On motion, Messrs. B. E. Kennedy, of Omaha, and D. H. Wheeler, of Plattsmouth, were made honorary members.

The Secretary was instructed to notify members to pay delinquent dues, or their names would be dropped. Adjourned to meet at 7 p. m.

The evening session was opened by the reading of the President's address. Messrs. Culbertson, Caldwell and Trester were appointed a committee to report upon this.

The first question selected from the question box was: "How to Winter Bees Successfully."

Prof. Culbertson opened the discussion. He would remove some of the combs, and spread the others, so the bees would have a chance to cluster in large bodies; would make holes through the combs, so they could pass from one to the other without being chilled. These, with thorough ventilation, dryness, and an even temperature of from 40 to 45 degrees, he considered the requisites. These conditions he thought more easily attained, taken one year with another, by means of a cellar especially prepared for that purpose. In regard to what he considered the requisites, nearly all agreed with him, yet the methods used to obtain them, were nearly as many as there were persons present.

Mr. Rouse wished his bees to be in a healthy condition, and to keep breeding until Oct. 10, if possible. Yet the young bee should have a flight to bear long confinement. He puts the bees on as few combs as they will cover, by putting in a chaff division board; puts a box with a cloth bottom filled with chaff on top; this gives thorough ventilation. He then packed hay around his hives, covering them up entirely, leaving no place for the bees to get out. He had colonies come through all right, with top ventilation, when the entrance was filled with ice. Others have the same experience.

Mr. Caldwell thought what would do one year would not another. He considered a good cellar the best place to winter in, but a poor one the worst place. He put husk mats on top of his frames, and chaff over that, and tried to obtain as nearly an even temperature as possible.

Mr. Vondorn crowds his bees on as few combs as they will cover, spreading these that they may cluster. Packs with chaff, and puts woolen cloths over the top; thinks it not necessary to have all young bees late in the fall to winter successfully. He thought the Langstroth frame as good as any for wintering.

Mr. Hawley had wintered his successfully in a cellar, and preferred that way.

The committee on revision of the constitution and by-laws made their report, which was adopted as read.

In the morning session, the election of officers resulted in the re-election of the old officers.

A paper, by Mr. Vondorn, on practical bee-culture, was read.

From the question box, the subject of "the best honey plants," was discussed.

Mr. Myer preferred rape to all others he had tried. He had 4 acres, and while in bloom, the bees worked on it both late and early, and during all kinds of weather. They would not work on buckwheat that was in bloom at the same time. Buckwheat was not recommended as worthy of cultivation. Sweet clover and matrimony vine were recommended to sow in all waste places. The President had applied to the department of agriculture for melilot and white clover seed, also motherwort seed to distribute among the Nebraska bee-keepers.

Mrs. Thomas recommended motherwort as one of the best. It was conceded that the most of our honey was gathered from heartsease and goldenrod; some thought sunflower secreted honey, but most thought not. Wild cucumber was spoken of highly.

The subject of "feeding bees" was discussed. The question was asked, why bees fed late in the fall do not breed as fast as when fed in the spring?

Mr. Vondorn said that cold nights were the cause, and also that bees seem to understand that it is the last of the season. He feeds a syrup, made by boiling 2½ lbs. of best sugar in 2 lbs. of water. The use of glucose for feeding was discouraged.

The next question was, "of what importance to the apiarist is selection in queen rearing?"

Mr. Ashland thought as much depended upon the selection of queens from which to rear our colonies, as with any other stock.

Mr. Vondorn thought more attention should be given to the rearing of choice drones, and to accomplish the desired purpose, we would have to establish our queen-rearing apiary several miles from any other colonies. He thought choice queens could not be reared for less than $3 each.

Queen cells should not be allowed to become chilled, as it is apt to make the wings defective.

In hatching 20 in a queen nursery, he found their wings and bodies defective. Upon examination with a strong microscope, he found them infested with small worms. The Cyprians were not so gentle and easy to manage as the Italians, but equally as good honey gatherers and for increase.

Read before the N. E. Convention.

Prevention of Swarming.

L. C. ROOT.

I am asked by the Executive Committee of this Association to give my experience as to the most successful method of preventing swarming. Much has been written and said upon this subject by many bee-keepers of the day, yet a successful method of controlling the desire to swarm in all cases has not yet been given us. It is therefore one of the hidden mysteries of bee-keeping upon which more light must be shed. As this can only be accomplished by continued study and the adding of our mites to the general fund, I will offer a few facts as they have been developed by a somewhat extended experience. In considering this question we must keep it closely by the side of the thought of our desire to keep our bees fully and constantly at work. It will be generally acknowledged that bees seldom swarm unless honey is being gathered to some extent.

The great question is: how can we keep our bees all at work storing surplus honey without the interruptions occasioned by the desire to swarm and its results. Let it be borne in mind that the conditions which hinder our bees from storing the greatest amount of surplus honey are the same as will create the desire to swarm. We have been told that the size of the hive has little to do with this desire. In contradiction to this I wish to say that, in my experience, it has much to do with it. When you pass through an apiary, during a flow of honey, and see from one to eight quarts of bees lying upon the hives, it indicates not only that the conditions are such as to induce swarms, but also that the bees are not as fully occupied in gathering honey as they should and might be if proper precautions were observed.

Let us notice some of the conditions necessary. I shall indicate as the first requisite a good prolific queen; second, sufficient room for the queen to deposit eggs; third, plenty of room for the bees to store honey; fourth, suitable ventilation; fifth, the proper shading of hives.

While I do not assert that in anything bees never deviate from the general rule, I have ample reason for believing that if the rules I lay down are observed, fair success may be obtained. While my conclusions here reached are based largely upon experience of past years, they are more largely the result of that of the past season, during which time we have had more than ordinary opportunities for observation. It is generally known that our yield of honey for 1881 was very large. In fact, I believe that our yield from one apiary of 40 colonies, of a little over 243 lbs. average per colony, is the largest yield from an entire apiary of the size, ever obtained. I speak of this to mark the fact that this was an apiary where the colonies were the most populous of any I had ever known, and yet we had not the slightest trouble in preventing swarming where the requirements named were supplied.

I may be asked what the first mentioned essential of a good prolific queen has to do with the desire to swarm. I shall not be questioned as to the desirability of such a queen, in other respects. My answer is: that when other conditions have been complied with, our troubles with swarming have been with such colonies as have contained queens that the bees desired to supersede. When the queen cells were sufficiently advanced, such old queens would leave the hive with the swarm, or they would be destroyed and the first young queen hatched would lead the swarm. It should be remembered that our surplus honey, the past season, was nearly all taken with the extractor.

Our second and third points of furnishing sufficient room for both queen and bees to be fully occupied may easily be attained, when the combs are extracted and interchanged, as may readily be done; but when box honey is desired, more difficulties arise. We may, by the most approved methods, add boxes which will afford sufficient room to store all the honey the bees would gather, but we find that the combs in the brood-nest must be kept so thoroughly occupied with brood and honey to induce the bees to work freely in the boxes, that often the desire to swarm is produced.

The fourth and fifth requisites, which are in the direction of preventing the hive from becoming overheated are very important. In a hive which is very populous, the necessary labor performed creates a great amount of heat. If the weather is very warm, and the hives are sheltered from such breeze as might be afforded, work will be almost entirely discontinued. This is one of the greatest reasons why bees on high ground, where there is a better circulation of air, and where it is generally cooler, gather most honey, other things being equal.

Our home apiary is in a very warm location. During the past season, as the colonies became populous and the weather warm, I noticed the bees lying out upon the front of several hives. I sent an assistant to draw the slide in the bottom board which closed an opening 5x10 inches. The next day in passing through the yard, I observed the bees all busily at work except in two hives. Upon examination, I found these two had been missed, and the ventilators were yet closed.

My conclusions, then, are that in securing extracted honey, with proper management, swarming may in most instances be easily controlled; but when box honey is produced, it is much more difficult. Surplus boxes filled with starters of choicest comb-foundation, with free and immediate access, may be supplied as soon as the bees will occupy them. It is very important that this be not delayed until the bees have already the disposition to swarm. Proper ventilation and shade may be given; and combs of brood may be taken from the brood-chamber, and empty ones supplied. Yet during some seasons, and with some colonines, it will fail to prevent swarming. If we continue to investigate and unite our experiences, we shall yet attain the desired end.

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☞The Texas State Bee-Keepers' Convention will hold its meeting at Judge W. H. Andrews' Apiary, at McKinney, Texas, April 25, 1882.

WM. R. HOWARD, *Sec.*

* * *

☞A meeting of the bee-keepers of New Jersey will be held at Hall No. 25, Albany street, New Brunswick, N. J., March 15, 1882, at 10 a. m., to organize a State Bee-Keepers' Association. All interested are cordially invited. G. W. Thompson, Stelton; C. H. Rue, Manalapan; J. H. M. Cook, Caldwell, Committee on Call.

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☞The Texas State Bee-Keepers' Convention will be held at McKinney, Texas, on Tuesday, April 25, 1882.

CORRESPONDENCE.

For the American Bee Journal.

The New Races of Bees.

S. VALENTINE.

Bees are wintering well here, both out and in-doors. I have some on their summer stands and some in my cellar. I have just been down in the cellar where I have some 80-odd colonies, and they are all quiet and I think in good condition, except three, which are a little "fussy." The one that has the most "growling" about it is the colony that had my imported Syrian queen in. It is a strong colony, and there are a great many old Syrian bees in it; they are old, for I sent Mr. Root my imported queen last August.

As I have not reported on the Syrian bees for 1881, I will do so now. A year ago I wintered some six or eight Syrian queens. Early in the spring they were slower in breeding up than my albinos, but about the time clover began to bloom, they went to brood-rearing in earnest, and by the last of June they had so many bees I thought they hardly knew where to get lodging, and as I had some frames of honey, thought I would help them out of the trouble. I made some nuclei, and it insulted them so much that they would not receive a queen nor queen-cell, and a whole lot of workers went to laying at a wholesale rate, until they would pile twenty-odd eggs in one cell, and they continued to carry on this kind of work, until I called in a regiment of albinos and cleaned up things. I will give the facts on both sides as I observed them, and all can compare and decide for themselves.

The Syrian bees are not as large as the albinos or Italians, but are very active, and I think they guard the entrance better in cool weather. They fly swifter and light at the entrance and pass in quickly, but they do not carry as heavy loads of honey as the albinos or Italians, which adds to their quickness. The queens are very prolific and the workers not so apt to fill the brood-chamber with honey and crowd out the queen as the Italians and albinos, but the queens are more apt to lay in the sections. The workers are irritable, but if properly managed, can be handled on the comb without much trouble; but they desire to see what is going on and want to be right on or under your fingers, and if one gets pinched a little, is quick to give the signal and in a moment a thousand are running to see what is the matter; they laugh at a little smoke, until they shake all over. When you wish to shake or brush them off the combs, then comes the fun; they generally go in the air and then you find out you are dealing with Holy Land bees. I can take the sections from 5 or 6 strong albino colonies with as little bother, and in the same time, that I can take them from one strong Syrian colony. The Syrians did not equal the albinos in surplus honey.

When Syrian colonies are made queenless they build a great many cells, but generally destroy a goodly number of them before the queens emerge. When I sent Mr. Root my imported queen, her colony was very strong and I divided it, and I had concluded not to rear any more Syrian queens, but just then I received a letter from a customer at Fort Scott, Kansas, saying he would likely need a lot of Holy Land queens this fall and I let the divided colony (which was very strong, but queenless) build up 44 queen-cells, and after they were capped over they destroyed all but 8 or 9, which produced queens. They are also more difficult to introduce queens in.

I have therefore concluded to drop the Syrians. I have but two queens at present, which are mated with albino drones. I shall keep these for further experimenting, but will not rear any more for sale, unless they develop more favorably, hereafter.

I am preparing to run at least 150 colonies for honey the coming season, of which a large majority will be albinos. I prefer them to any I have yet seen. There will be a rush for early queens, the coming season; the orders that I have booked ahead will require over 100 nuclei.

Double Pipe Creek, Md.

* * *

For the American Bee Journal.

The Best Bees Controversy.

JAMES HEDDON.

In reply to my article in the BEE JOURNAL, Mr. Briggs made a man of straw and then knocked him down, to his evident satisfaction. When we cannot answer what our opponent says, we should not put words and ideas up to answer that he did *not* say. Mr. Briggs' way of getting at my meaning is not only quite ingenious, and favorable for a reply, but about like the little boy whose mother told him "never to despise a man because he wore a ragged coat." This little boy being obedient, commenced at once to despise all men who wore coats that were not ragged. It would seem impossible for anyone to misunderstand my meaning as Mr. Briggs seems to have done.

Many of our largest honey producers eschew the idea of purity of any special race of bees as a point in successful honey-producing, and many of those of less experience are foolish enough to think these men are as wise as those whose honey has never been seen in the markets, and if one of these men should order a queen from some equally foolish breeder, asking for one "tested for qualities and not color," there would likely be no questions arising afterward in regard to the "rings of purity."

A friend of mine (in whose words I have confidence), who has swapped "rings of purity" for bees that are producing immense yields of surplus comb honey, writes me that during the past season he has taken 700 lbs. of surplus comb honey from one colony and its three swarms, and they are not three-banded bees at all; neither are they pure anythings; they are simply a strain that he has produced out of the best Italians and Germans that he could get. He says they work on red clover immensely. He has 75 colonies that doubled, and averaged over 200 lbs. per colony, and are 15 lbs. each too heavy now. One noteworthy difference between his bees and the "pure three-banded," is that he has no queens for sale, and does not wish his name given; he is not a queen vender, but a home breeder and honey producer.

Does Mr. Briggs really think that it is more difficult to test bees for bands than for business? If so, why not quit testing for bands, for all you can claim is that they indicate certain business qualities, and test for the qualities direct? Does he imagine that a honey producer will complain of the number of bands upon a queen or her progeny, if they fill the bill of his expectations for qualities. Every queen that I call "tested" will have to pass through a different crucible and a far greater period of time, than those of the prize test. By a tested queen, I mean one proven to be normal and healthy, and lays eggs that hatch out bees that (no matter where, how or what they work upon) store large amounts of honey, build comb readily and behave peaceably. A queen that does that is tested to my entire satisfaction, and if she produces bees having no bands or four, as large as kittens or as small as yellow jackets, or is herself dark or light, large or small, normally or excessively prolific, she is of value to me; and what I prize for myself, I prize for others, and *vice versa*. I could test queens for bands with less than one-fourth the labor and time that I can for the qualities named above.

My experience is that large workers are usually found keeping company with the test qualities above named, but quite often small queens. There are other minor points of preference; but if we add them to our test qualifications too soon, they may get in the way of the more vital ones mentioned. I deem such a course poor policy.

I think, just what Mr. Briggs and I believe in regard to breeding, is pretty well understood. We do not differ in regard to what we want, but only in the method of obtaining it. We both want a better bee. Neither of us are old fogy enough to say, "we have reached perfection." Mr. B. puts great stress on the 3 bands that we have had for hundreds of years. "Keep them pure, as they were," seems to me to be the idea, in fact.

I believe the German bee has some very excellent qualities that the Italians do not possess; I want these qualities to become a part and parcel of "the coming bee," and for 5 years I have advocated working for it. The main difference in opinion is, I want two races (and may be, by-and-by, more) and months and years of time to test them, while Mr. Briggs wants the three-banded race exclusively and a few weeks of time, if I understand him correctly.

If a general outpouring of opinions upon this subject now under discussion could be had, I think that Mr. Briggs would be astonished. I have had private letters from many of our oldest queen breeders upon this subject, and every one of them substantially agrees with me. Thousands of the inexperienced, believe that this system is the only correct one.

Nothing will ever conclusively settle this problem except years of experience of those who are trying to support themselves and their families by means of the cash realized from surplus honey.

Dowagiac, Mich.

* * *

For the American Bee Journal.

How to Use the Apiary Register.

E. A. THOMAS.

The Editor of the BEE JOURNAL has done it! He has gotten up a neat well bound Register, well adapted to the wants of all apiarists, and I believe it will pay every one who has a dozen colonies or more to send and get one. By its use you can improve your bees, developing their most valuable qualities and thus increase the products of your apiary. We all wish to secure the largest amount of surplus honey from our apiaries, this being the chief end of bee-culture now, therefore, any means that will tend to increase the surplus crop, either directly or indirectly, should be embraced by all progressive bee-keepers. A careful and correct use of the Register cannot fail to redound to your ultimate success.

Some one way back in the corner may say that it "don't pay," or, "it is too much trouble." The first objection I have already answered; in regard to the second I will say that after learning to keep the Register properly it takes but very little time, it being in convenient form for carrying in the pocket while at work in the apiary.

Perhaps a few hints about keeping a correct Apiary Register may be timely here, and assist many in filling up the blanks in their books.

The headings are all plain and easy to understand until we come to the characteristics. Perhaps if I tell you how I mark my own queens, you will better understand how to use this part of the Register, so important in breeding valuable strains of bees and in developing any particular quality which you desire your bees to possess.

1. Industry. I have kept a record of the industry of my colonies for years, and my success is due in part to this fact. At intervals during the early part of the season before the honey harvest opens, I note the exact condition of every colony under the head of Remarks. I have found that about as sure a way to test the industry of a colony is to note how they work on the first pollen in spring; if they are found indolent at that time they will not prove very valuable as honey gatherers. At the close of the

season I proceed to mark each colony, taking into consideration the amount of honey they have stored, making proper allowance if extracted; their condition at the opening of the honey season and at its close; the vigor with which they work on the early pollen in spring; the weight of the colony in the fall. In the case of a young swarm I estimate the weight of the swarm when hived, and proceed as before.

After a careful consideration of all these points, I mark all the colonies that have given the best results at 75; those next the best at 70 and so on down; 100 is supposed to be a standard to be sought for but not yet attained. I rear my queens from those which stand the highest, and allow no colony to rear any drones that is marked below 75. I change the queens of all colonies marked below 50, at once. The next season, if I find any colony that beats the best record of the previous year I mark them 80, and so on up. After raising the standard of the best to 85, I raise that of the poorest to 60; that is, I change the queens of all those that are marked below 60. By this method of culling the best for breeding purposes and destroying the poorest queens, I have improved my bees to that extent that, at the "annual marking" last fall the best stood at 95 and the lowest at 75. I am cognizant of the fact that, without the aid of an Apiary Register I never could have obtained such satisfactory results in breeding, which have exceeded my most sanguine expectations.

2. Docility. The next space in order is headed Docility. Although secondary to some others, this is a valuable trait in a good strain of bees, and it is well to develop it as much as possible without interfering with other and more important qualities. No one will probably have any trouble in filling up this space, but I would suggest that, in deciding on the relative docility of colonies, they be manipulated on the same day and at the same time of day, using an even quantity of smoke and equal care. Any deviation from this rule will result in an inaccurate marking, as the atmospheric changes exert a great influence on the temper of the bees.

3. Hardiness. This is one of the most important qualities which an improved strain of bees can possess, and I earnestly recommend a careful consideration of this point. I apprehend that the solution of the wintering problem depends in a measure on breeding hardy bees; I speak from experience, having lost only two colonies during the last ten years, a result which is attributable as much to my bees being of a strong, hardy race, as to any improved methods of wintering. In marking the hardiness of colonies, great care and judgment is required. I always take into consideration their exact condition in fall; their condition when taken from their winter-quarters; how they stand the first cold winds of spring, etc. As hardiness must have an indirect influence on the amount of honey which the bees will store, I presume the colonies giving the best results to be the most hardy as well as industrious, all other things being equal. Any argument in regard to this point will be out of the limits of this article, but if my meaning is not sufficiently plain, I shall be pleased to make it more clear at some future time.

4. Prolificness. In filling up this space I give particular attention to the strength of the colony. It is not always the strongest colonies in spring that contain the most prolific queens. A colony, although strong in the fall, may become depopulated from some cause or causes entirely beyond the control of the apiarist; therefore, a small colony in spring is not a sure indication of an unprolific queen. It seems to me the only correct way to mark them is to consider the amount of brood in proportion to the strength of each colony.

5. Color. I select the largest, best shaped queens, having an abdomen all yellow, and that produces the largest, finest and most uniformly marked bees as a standard, and compare all others to her. In this way I can mark every queen very accurately.

In conclusion, I wish to again call your attention to the value, aye, the necessity of an Apiary Register in breeding an improved strain of bees. If bee-keepers in general will get a Register, and keep a careful and concise record of every queen and colony, it will not be long before our American Italians will have a World-wide reputation. It may not be improper for me to say here, that I have already had several calls for queens, from Scotland, Germany and other parts of Europe, to be shipped during the coming summer. I have kept a Register similar to the one Mr. Newman has just gotten up, for a great many years, and I believe my success in breeding the present princely strain of Italians is due in a great measure to this fact.

Coleraine, Mass.

For the American Bee Journal.

Foundation for Surplus.

C. C. MILLER.

Instead of using small starters I practice filling the sections full of foundation. This makes me anxious to find and use that which is the very best for the purpose, and I am glad of any light I can get on the subject. I am inclined to believe that unnecessary ado has been made about the "fish-bone," and that in many cases more of a "fish-bone" than many suppose, can be found in the natural comb. Still, I think the utmost care should be taken to leave no room for objection, and our combs should equal as nearly as may be, or, if possible, excel the natural comb.

So rapid are the changes and improvements in foundation that it is difficult for anyone to keep track of them all. As yet I have only tried the Root, Dunham and Van Deusen, and can only give my experience for what it is worth. This season I shall try the Vandervort and Given. The flat bottomed or Van Deusen I do not like so well as the others, and although some think the Dunham is not suitable for surplus, I had a lot of 70 lbs. that pleased me well. It ran less than 6 feet to the pound, but the base or septum was very thin. Some Root foundation running 10 feet to the pound was nice, but was made in narrow pieces, was crooked, and did not cut to advantage.

In the present unsettled state of affairs I do not know that it is possible, but for those who use foundation by the 100 pounds it is certainly desirable that there should be some settled understanding as to what consitutes thin foundation, and the proper price therefor.

For one, I am not anxious to have foundation running so many feet to the pound provided the middle wall or base is thin, for if it has high side walls and the bees will thin it out, I think it will be a gain. But foundation 10 feet to the pound cannot be afforded for the same price as that running 6 feet to the pound, even if the base of each be exactly the same in thickness. The custom of charging 10 cents per pound extra for surplus foundation is well enough if that much difference is in the making, but when I am charged the same price for foundation running 7 feet to the pound with the wax mostly or altogether in the base, as is charged for 10 foot foundation, I feel that I am not getting the best end of the bargain. If any uniformity can be established, it will be a blessing.

Marengo, Ill.

For the American Bee Journal.

Section Honey Boxes.

A. D. STOCKING.

Mr. E. A. Thomas, in the BEE JOURNAL for January 25th, objects to the one-piece sections, although my experience with sections has been limited, I think the one-piece section the strongest and quickest put together, and it certainly is the neatest; it will stand more jarring and careless handling without cracking the combs than either the dovetailed or nailed section. I have never seen any dovetailed sections that would not get loose in the joint after being put together, standing awhile and getting dry, and the least jar racks them out of shape. Propolis will not hold them when it is cold, they require the joints to be dipped in glue to be safe. This is my experience with dovetailed sections.

As to breaking in putting the one-piece section together, if they are made from good stuff there need not be one in a hundred broken; take a sponge dipped in water and draw across the joints and pack them close for a short time, and they will bend nicely, and if a small paint brush be dipped in hot glue and drawn across the joints, they will be perfectly secure. It will take but a few minutes' practice to get the knack of putting them together so that they can be done (even with the gluing) faster than the dove-tail can be put together. I have no interest in the manufacture or sale of any section.

Ligonier, Ind.

For the American Bee Journal.

The Theory of Parthenogenesis.

DR. WM. R. HOWARD.

As *puer Americana* has "dissected" my article in the AMERICAN BEE JOURNAL, vol. 17, page 290, and not tried to compare the parts, or advance any arguments to disprove them, I will simply answer his questions, while I examine his assertions. In BEE JOURNAL, vol. 18, page 42, he says:

"I also deny (with Mr. Robinson) that parthenogenesis is a fact proven in nature." I will call his attention to the last paragraph in the article above referred to, in which I said: "Now, since parthenogenesis or agamic reproduction is the production of living individuals, without the actual congress of the sexes, he is compelled to admit the production of drones by parthenogenesis." Now mark, it is a well known fact, that virgin queens and "fertile workers" do lay eggs which produce living individuals, and no one has ever shown that these workers had been fecundated by meeting the drones. Again, he says: "All admit that the queen bee is not bisexual, therefore all her eggs must be fertilized by the spermatozoa of the male to produce fruitfulness." If the queen bee is not bisexual then she must be asexual, or a hermaphrodite, so called. If she is not a bisexual insect what is the use of congress of the sexes? I stated that "fertilization of the female germ by means of the male sperm, through the congress of sexes, is the rule with bisexual animals, but there are exceptions among insects." He says: "asexual, i.e. without sex is not a law in nature." I plainly defined the meaning of the term as I used it, and there certainly was no cause for his misconstruing it, viz: "The individuals in whom this budding process takes place are called 'asexual,' because, though they may resemble the female sex outwardly, their sexual organs are only partially developed."

He denies the budding process altogether. I ask him to explain the reproduction of the *aphis*, taking Huxley's 8 conclusions for his text. He says that "asexual" and "agamic" are confined to "botanology" alone, or "applied only to vegetable life;" if so, why are these terms so often employed by the best authorities in connection with animal life. He quotes as if from my article, "eggs that you wish to hatch must be left to the care of the bees." I have read the article over and over, and have overlooked it, or it is not there. I find no such language; though it is a truthful assertion, there was no point under consideration that demanded its immediate presence.

Again he says that "neuter cannot be applied to workers, for they are undeveloped females." Neuter was formerly applied to those hymenopterous insects having females of dimorphic forms, in order to distinguish the sexual form, or those which produced true eggs, and capable of sexual semen and fecundation, from the "asexual" form (neuter or worker ants and bees), some of which have been known to produce young without the interposition of the male.

In conclusion, I will say that, in the above, I have merely called attention to the "dissected" article to prove the points he refers to, and had he carefully read it, and thoroughly understood it, he would have been spared the pains of even referring to it, unless he could have advanced some arguments to disprove the points mentioned, or have given some evidence to establish his own assertions. Mere assertions, without any attempt toward proof, are puerile in the main. At "that well where truth lies hidden," we all hope to meet—*puer Americana*.

Kingston, Tex., Feb. 10, 1882.

For the American Bee Journal.

Wired Comb Foundation.

E. T. FLANAGAN.

The great advantage wired frames possess over the unwired is so obvious, that it is strange that the practice of wiring all frames used in the brood chamber, and for extracted honey, is not more generally practiced. I know that in many quarters there yet exists a prejudice against wired foundation and wired frames, but when the work is properly done, and a fair trial given, all prejudice vanishes. The great difficulty at first was to get wire, or rather use wire, small enough to be fully imbedded in the septum, and yet strong enough to resist considerable pressure, and, at the same time, free from corrosion or rust. After many trials, this was accomplished by the use of tinned wire (No. 30 being the best size). Yet, even with the advantage of proper wire success did not always follow, owing to the inaccurate manner the wire was placed in the frames.

When made by steam power, the holes in the frames are pierced before the bars are ripped out, and when done properly, are as correct as could be desired; but the majority of bee-keepers make their own frames, and, consequently, the holes have to be made by hand, and it is almost an impossibility to do it correctly in that way; besides the labor and fatigue, the time taken to pierce, say, 6 holes in each bar, or 12 to a frame, is very great. After having pierced and wired a large number of frames, and finding the work not so accurate as I desired, I obtained from F. B. Chapman, of Scipioville, N. Y. (by the way a successful bee man), a little machine, worked by hand, that he calls a "bar piercer," and I must say that after my experience in making the holes by hand, that I would not be without this machine for double its cost, could I not get another. It is simple, accurate, easily worked, and quite rapid in execution. I pierced over 600 bars in an hour, and done much better work than was possible by hand. It can be arranged to pierce as many holes as are desired at one operation or stroke of the lever or handle. Any one possessing ordinary mechanical skill can make one, and Mr. Chapman deserves the good will of all who need such a machine, for generously giving it to the public.

Belleville, Ill., Feb. 1, 1882.

For the American Bee Journal.

Wooden Separators for Sections.

C. R. ISHAM.

MR. EDITOR: In your comments on my remark that "the apiarists in this part of New York, in the future, would use wood separators in the place of tin for surplus sections," you say that, so far as your observation is concerned, their use had not been a success, and you should await with interest reports from those using them the coming season.

My greatest success in apiculture has been in getting comb honey for the city market, and dates back to the time I became a subscriber to the BEE JOURNAL, then edited and published in Washington by the lamented Samuel Wagner.

I persisted in producing comb honey when Mr. A. I. Root was proclaiming in *Gleanings*, that, with him, honey boxes were things of the past, but who afterward perfected machines for rolling out foundation which created a revolution in the profitable production of box honey.

My first experience with separators was in using thin, perforated boards. I afterward used glass boxes with tin corners, until a fire in June, 1879, destroyed my buildings and most of my machinery for manufacturing them. With honey harvest at hand I adopted the speediest method to secure surplus going to waste, necessity compelling me to use separators at an expense of some $40 or $50 for tin; but just as soon as I could get my machinery to work, I commenced replacing the tins with wood, and to-day could not be induced to use tin for new racks or frames, if it was furnished to me free of cost!

The facility in changing the size of our sections to meet the demands of trade is of no small consideration, as it enables us to do so at comparatively little expense. The one fact of its giving a wider entrance, saying nothing about warmth or cheapness, is enough to commend their use to every thinking, practical apiarist, who is engaged in producing honey for profit.

When I see my views so strongly confirmed by such successful honey producers as Messrs. Newman & Son, of Peoria; Messrs. Van Eaten & Rians, of York; Stanley & Bro., of Wyoming, and the Messrs. Benedicts, of Perry, who, for the past several years, have been producing box honey by car loads, I feel that my position is practicable, and that time and experience will confirm, as a grand reality, that which you now look upon as a doubtful success.

We took an advanced position in advocating and using foundation for surplus honey, when it was condemned by Messrs. Doolittle, Betsinger and others at the Northeastern Convention; also at the National Convention held in New York, when Messrs T. G. Newman and A. J. King complained so sadly; the first named, about the "fish bone" in the center of the comb, and the latter commented so severely upon a case of honey he had received from Mr. A. I. Root, in which foundation had been used full size for starters.

The next fall Mr. King, in the *Bee Keeper's Magazine*, spoke of a car load of honey shipped to New York by Messrs. Newman & Son, of Peoria, N. Y., and myself, as it stood piled up on the sidewalk in front of Messrs. Thurber's store, as being the handsomest lot of honey ever brought to New York, yet this same pile of honey owed its fine appearance to having been built upon wax foundation whose use for surplus he had severely condemned only the fall before.

It was some of this lot of honey which found its way to the Queen's table, giving it a place in the menu of the titled aristocracy of Great Britain, thereby helping to open up a foreign market for the surplus product of our apiaries.

Thin wax foundation properly made, in the language of one of New York's foremost apiarists, is a "grand success," and I believe wooden separators are destined to supply the great desideratum for the cheap production of surplus honey.

Peoria, N. Y.

[Mr. Isham is a practical and progressive apiarist, and we hope that another year's experience with wooden separators will fully equal his expectations. We object to nothing that is progressive and practical, but must say that this needs some further demonstration.—Ed.]

For the American Bee Journal.

A Plan for Wintering Bees.

J. E.

One of the desiderata in the successful wintering of bees, is pure honey, and the absence of pollen in the brood nest. An excess of pollen in the combs will lead to brood-rearing, during a warm spell in winter. This is an abnormal state, and, if followed by protracted cold weather, will result in dysentery.

To obviate this difficulty, I propose the following plan: Put away nice worker combs, well filled and sealed, containing pure honey gathered early in the season, as this will be found to contain the least pollen, in number equal to two combs for each colony. Then, after brood-rearing has ceased in the fall, go round to each colony; lift out all the combs, shaking the bees back into the hive, and place two of these reserved combs of honey, 1½ inches apart, in the center of the hive; place a division board on the outside of the combs, packing the outside empty spaces with some absorbing material; cover with a quilt and chaff cushion in top story, and leave them until pollen begins to come in freely in the spring; then place an empty worker comb in the central open space; the queen will quickly fill it with brood, when one of the division boards may be moved back and another empty comb inserted in the brood-nest.

This operation may be repeated every 10 or 12 days, according to the weather and amount of the honey flow, until the hive is filled with combs.

The advantages claimed for this method of wintering, are that the bees are packed up snug and warm, the open space in center giving them opportunity to cluster together in a compact mass, thus enabling them to keep up a proper temperature, and prevent loss by small bodies of bees being caught between the outside combs during a cold spell. Also brood-rearing can be regulated in the spring, according to the judgment of the bee-keeper, as they will rear no brood of any consequence during an absence of pollen in the hive; and every bee-keeper knows that too early rearing of brood is detrimental to the welfare of the colony.

Gainsville, Ky.

For the American Bee Journal.

Location is an Important Matter.

J. A. BUCHANAN.

No doubt the kind of hive used, and skill in management, has much to do in making the pursuit of apiculture a success, but location plays the most important part. Perhaps one-half or more of the bee-keepers of the country have a location where nearly the entire crop of surplus honey is secured from white clover, and but little from other sources during the season. Now, as we can here only count on from 3 to 6 weeks' yield from clover bloom, it may be easily seen that ordinarily, not very large quantities of surplus can be obtained. And, indeed, taking into account the number of seasons clover bloom fails to secret honey, save in limited quantities, it may be questioned whether in such localities, bee-keeping, as a specialty, can be made to pay? Where even fair yields of surplus are secured from apiaries so situated, much more credit should be given to the apiarist than to those favored with a location giving them a second opportunity to secure surplus from fall flowers.

The seasons following long, cold winters, bees are usually left in a weak condition, and do not become strong in numbers, and of proper age to take the field and secure the full benefits of this short yield, and the chances are that many will only get there in time to find the season ended, and no surplus secured. Bee-keepers so located as to be favored with both an early and a late bloom, in such abundance as to give good yields of surplus, have more than a double advantage, and for such, with almost any kind of hive, it would indicate a poor knowledge of the business, if reports of large yields of surplus honey could not be shown. There would be for the fall yield, or for any yield after clover bloom, bees in such great abundance, and of the proper age, together with the favorable weather usual for that season of the year, to give the most satisfactory results.

Since the same form of hive and management will not give in all localities similar results, I am by the nature of the subject led to briefly consider the question of the hives best adapted to location. Why is it that there is such a diversity of opinion as to the best form of hive or depth of frame. I claim that location and time when bees store winter supplies, has much to do in bringing about these conflicting opinions.

Take a locality where the honey supply for winter is stored during the blooming season for white clover (June and the early part of July), when the season for storing is ended, and the hive well supplied, the honey, if in shallow frames, will be in good condition for the bees to winter well, but by the approach of cold weather, if no fall honey is to be had, it is found that the honey in the center combs is nearly all consumed, and the colony in poor condition to pass safely through a cold winter.

In this case we have a helpless condition of things, unless means are provided for a safe and ready passage for the bees over the frames to the stores in the outside combs; but this timely precaution is not always attended to, and here follows heavy losses, and a vehement condemnation of the shallow frame. But if the honey had been stored in the fall, the same as before described, and not being much drawn on for the support of the colony before winter, there would be no complaints about the shallow frame. I think this a reasonable explanation, founded on facts, which makes plain why such great differences of existing opinions as to best form of hive to adopt. "What is one's meat is another's poison." That form of hive most successful in our locality may be a failure in another. Hence to draw the inference that deep frames with large storing room in the breeding apartment, for localities where stores for the whole season are gathered during the early bloom, and shallow frames and smaller breeding apartment, if supplies are gathered during both early and later in the season. Taking this as a correct view of the matter, there is no necessity for so much controversy as to the best hive or best manner of manipulation.

Experiment a little and ascertain the kind of hive and management best suited to each peculiar location.

Holliday's Cove, W. Va.

☞ It would save us much trouble, if all would be particular to give their post office address and name, when writing to this office. We have letters (some inclosing money) that have no name, post-office, County or State.—Also, if you live near one postoffice and get your mail at another, be sure to give the address we have on our list.

SELECTIONS FROM OUR LETTER BOX

Much Honey Consumed.—I put 33 colonies of bees into the cellar about the 10th of December, most of them well supplied with honey, and in good condition. To-day I set them out, and I never saw them fly livelier in June, than they did from 10 until 3 o'clock. All in good condition except one late swarm, which had starved. Had I better return them to the cellar, or will they do as well out, if the weather continues moderate. They have consumed nearly double the honey, already, that they did all last winter, put away in the same room, and prepared in the same manner. Can you give a reason for it? I like the make-up of the BEE JOURNAL this year much better than last, and consider it A No. 1. REUBEN HAVENS.
Chebanse, Ill., Feb. 8, 1882.

[Leave them out, unless the weather becomes extremely cold. With the probability of frequent flights from now until spring, they will suffer no harm. The excessive consumption of honey was owing to high temperature in the cellar, and the uneasiness caused thereby. We presume you will find more or less breeding has taken place, while last winter there was none.—ED.]

Bacterium.—I thought bacterium was gone and pollen had taken its place; but as it appears to be returning, a few words concerning it may not be amiss. Bacterium, or the plural bacteria, which is most commonly used, are minute forms of vegetable organism. They are found in the sap of trees and vegetables, in the fluids of all animals, and abundantly in decaying substance. They are so minute that they float in the air unnoticed. They appear to be the root or starting point of fermentation or decomposition. They have no effect on any part as long as vitality remains. To illustrate: If a growing apple receives a scratch on it, not enough to stop its growing, the scratch will heal over and become sound; but if the apple is fully ripe, bacteria get in and fermentation, rotting and decomposition is the result. Again, bacteria do not work much below temperate, and not at all below freezing. They work better the hotter it is, until it gets hot enough to destroy vegetable life. Let us compare this with bee dysentery. Bees are most apt to have the dysentery in long spells of severe, cold weather, when the bees are quiet and the hive at its lowest temperature—at a time when bacteria work but little if any. On the other hand, when it is warm and bacteria work the fastest, the bees (if they have enough to eat) are entirely free from dysentery. I write for the consideration of the considerate. E. B. SOUTHWICK.
Mendon, Mich.

Bees Wintering in First Rate Order.—I received the "Apiary Register," and it just fills the bill. Every bee-keeper should have one, if he has not more than 10 colonies of bees, for he can by it tell, at a glance, the condition of every colony of bees in his apiary, and know what changes are necessary, without looking over the hives. My bees, so far, are wintering finely, and to-day they had a fine flight. But very few bees have died; I think a tea-cup would hold all the dead bees out of 30 colonies. Twenty-seven are on summer stands, packed in chaff and straw, and 3 are in the cellar. I am very sorry to hear of the misfortune of H. A. Burch, of South Haven, Mich.; he furnished me with some of the finest queens it has ever been my lot to get. The queens were very large and prolific. The bees are long, leather-colored, very gentle, and great honey gatherers. His dealings with me were very satisfactory and just what he agreed to do. I wish I could say as much for one other dealer and breeder that I have had the misfortune to have dealings with, and have written letter after letter to him, and cannot even get an answer. What size will it be necessary to put holes into zinc for entrances to hives to prevent drones from flying.
L. DENSMORE.
Livonia, N. Y., Feb. 8, 1882.

[The holes or perforations in the zinc excluders are just ⅜ of an inch. Some use them with round perforations, while others cut out strips 1½ inches long by ⅜ wide, and running horizontal with the entrance.—ED.]

Better then Ever.—When I say that I like the AMERICAN BEE JOURNAL better than ever, and I may add, better than all others, I mean just what I say. The first and most important improvement was the change from Monthly to Weekly; the form of the Weekly I did not like, but made no complaint, because I knew you would change it whenever it became our and your own interest to do so—I was not mistaken. Your disposition to accommodate your patrons I very much admire. With the editorial commencing on the first page and the advertisements on the last pages, I think it is all we could desire. Permit me, however, to make a suggestion—if it would not interfere in making up the form—would it not be better to place the date at the top of each page, as in Vols. 9 and 17, it would certainly be a great convenience in reading. I hope soon, if time permits, to send you a communication on the "Improvement of the Italian bee." I have cultivated it with great care for more than 20 years, and differ with some of our writers concerning it.
WM. S. BARCLAY.
Beaver, Pa., Feb. 8, 1882.

[Thanks for the compliment. As to the running date on each page, we discarded it on account of its troublesomeness. We shall be pleased to receive the communication.—ED.]

Tin Numbers for Hives.—I would suggest now that you get up a tin tag 3 or 4 inches square with the serial on them, to go with the Apiary Register. The numbers could be stenciled on or could be printed with gum stamps. The figures should be large enough to be plainly seen for some distance. In this case, if the queen is changed from one hive to another, the tag can be taken off and go with her, and no alteration would have to be made in the Register. JOHN C. PEDEN.
Lawrenceburg, Ky., Feb. 9, 1882.

[The numbers could be put on very readily with a stencil-plate. We fear the tin tags would be too expensive, and too easily lost.—ED.]

Doing Nicely.—My 57 colonies are wintering nicely. I looked through them on the 6th, and found all alive, strong, and active, with plenty of stores with ordinary weather to take them through all right. We have had an exceedingly wet, changeable winter. I use A. G. Hill's winter hive on summer stands, without protection, with wire screen under the center of the bottom board. This is the winter for this mode of wintering, and has been a grand success. I have lost but two weak colonies in four years. The past season, on account of excessive drouth, was a poor one for honey with us. The early spring opened up finely, and late fall closed out nice. ASBURY MCKNIGHT.
Bible Grove, Ill., Feb. 1882.

N. E. Wisconsin Convention.—In the BEE JOURNAL of Feb. 1, 1882, page 67, under the heading "Another reform needed," reference is made to the N. E. Wisconsin Bee-Keepers' Convention advertised to be held in Berlin, Wis., Jan. 17th and 18th, that was not held there and then. It is due those who were disappointed about that meeting that some explanation be made. The Secretary of the N. E. Wis. Association was unavoidably absent from the meeting at Pewaukee, in October, 1881, and it appears from her statement that last winter it was decided to hold but one meeting a year and that in October, which was known to but few that were at Pewaukee, and overlooked by those present who did know when Berlin was fixed as the place and Jan. 17th and 18th, 1882, as the time of the next meeting, being about the time it was held last winter. I sent you a report of the Convention at Pewaukee for publication, from which you took a notice of the meeting to be held at Berlin, Jan. 17 and 18, which was all right had the meeting gone on, and perhaps all right, any way. But after that report was sent, the Secretary wrote me, suggesting that the meeting be held the latter part of March, and requesting me to notify those at the Pewaukee meeting of the change, some of whom were notified, but no notice of this change was sent to the BEE JOURNAL, because the Secretary, after notification that a change would be agreeable, had not time to notify you before Jan. 17th. I failed, through the pressure of other engagements, to give the Secretary the necessary information in time to have the matter set right, which I regret very much. The N. E. Wisconsin Convention will yet meet at Berlin, when it does meet again, and will probably do as well for the friends of the Association to make amends for this disappointment, as they did for the friends in the vicinity of Pewaukee at the meeting there.

T. E. TURNER.

Sussex, Wis., Feb. 10, 1882.

The Lewis Section.—1. Has any one tried to use the Lewis improved one-piece section? 2. Is it really an improvement? 3. How do the bees get into the sections without a side inset? Please answer through the BEE JOURNAL. W. S. BUCHANAN.

[Having had no experience with the "Lewis improved one-piece section," we cannot say whether it is an improvement. Mr. Lewis' circular gives directions to use them in cases by spreading, allowing spaces between for the entrance of the bees. For use in the rack, they will, of course, require to be spread in the same manner, using wooden separators between them.—ED.]

Irregular Combs.—To straighten irregular combs I have practiced the following plan: Warm the combs by placing them in the sun until they are soft and pliable, then lay them on a flat, smooth surface, as a hive cover, and another flat surface, as a piece of plank on them, to press them down level, and let them remain thus till cold. They are then ready to hang in the hive, nice, even, and straight as could be desired. This is my practice, and my hundreds of straight combs, without an irregular or crooked one, is the result. I never shave down, nor melt up good combs into wax.

S. D. McLEAN.

Columbia, Tenn., Feb. 10, 1882.

An Excellent Report.—Last winter I only saved 5 colonies out of 41 prepared for winter the fall previous. These 5 were in very weak condition and I had but little hopes of any surplus from them. I obtained 2 colonies from my neighbors, making 7 to begin with. When the warm weather came they built up beyond my expectations, and gathered a small surplus from white clover; basswood lasted but a short time; red clover did well for the first time in a number of years, and buckwheat yielded sparingly. To sum up: I obtained 1,650 lbs. of extracted honey from my 7 colonies, spring count, averaging 2055-7 lbs. per colony. I increased to 19, which are in the cellar with sugar syrup and no pollen. The honey which would have been required to winter them, is not included in the 1,650 lbs. After reading Mr. Heddon's articles, it set me thinking about my losses last winter. I found, by examination, that the colonies I fed the syrup to, had only such combs in the hive as I had used for extracting, and had no pollen, while those that died, with natural stores, had large quantities of it. I think I never had bees winter so far with the loss of so few, as the present, but the worst time is yet to come, of course.

A. A. E. WILBER.

Moravia, N. Y., Feb. 6, 1882.

Will Air-tight Jars prevent Honey from Candying?—When extracting last August I filled a Muth two-pound glass jar and corked it. The rest of my honey I turned into a can. I drew off a portion of it into tumblers in the fall, and while the honey in these has candied solid, that in the jar remains as clear as when extracted, though it has stood in the light every day since. The honey remaining in the can is still liquid, though it shows signs of granulating. Will honey which is put in an air-tight jar immediately after extracting remain liquid? Or, how do you account for some of this honey candying, and some not? Please answer through the JOURNAL. JAS. MCNEILL.

Hudson, N. Y., Feb. 9, 1882.

[We cannot account for it, except that it has remained where it did not become so thoroughly chilled as did that in the can. Perhaps the lack of evaporation had something to do with it. We have had many samples of extracted honey, which have candied in air-tight bottles; some, too, that was quite new when put up.—ED.]

What Was It?—In May of last year 2 colonies of bees, in fair condition, were found to be idle and hanging listlessly around the entrances to the hives, while their neighbors were busily engaged in bringing in honey and pollen. An investigation revealed the fact that perhaps ¼ of their brood was dead and decayed in the cells—some of it unsealed and some sealed, but with perforations in the cappings. The bees could not, or would not, remove the sticky mass from the bottom of the cells, so I proceeded to do it for them with a bent pin, and I continued to do so for one of the colonies, at intervals, until they fully recovered and made a prosperous colony. With the other I adopted a more radical course, by removing all their combs and making them start a fresh lot of brood, which all proved to be healthy. What was it?

J. L. WOLFENDEN.

[It was brood which had become chilled, and the bees were disheartened and discouraged. Had it been foul brood there would have been a recurrence of it in the two hives, and would have extended to other colonies.—ED.]

Bees in the Cellar doing Well.—I have 50 colonies in Langstroth hives in the cellar, doing finely. Last season was a very poor one for bees, in these parts, but little surplus honey was produced. A. REYNOLDS.

Quaker Springs, N. Y., Feb. 6. 1882.

Climbers for Shade.—Can the BEE JOURNAL give the name of a good annual climber that will furnish shade for hives and pasture for bees? In view of the action of the N. E. Convention, I should be sorry to become famous for anything, in apiculture. If the National Association cannot honor every man, they had better not mention any, for fear some side affair will kick up a row about it. I have lost six colonies already. Direct cause, old bees; indirect cause, poor bee pasture. WM. CAMM.

Murrayville, Ill., Feb. 11, 1882.

[We do not know what to recommend as the best annual climber for shade and bee pasture, too; but would try some of the better and more prolific varieties of cucumbers, thus realizing a shade, honey, and a profitable crop of cucumbers for market, which of itself would pay the cost of cultivation. In all attempts at planting for honey, we would advise a preference always to be given that which possesses a value aside from its honey yield—not that honey itself will be unremunerative, but because a double crop, and hence, a double profit, is more desirable than the single return. We are convinced the N. E. Convention will at some future time see the error of their way, in condemning so unmercifully the National Convention. A mild reproof will often carry stronger conviction than bitter denunciation.—ED.]

All Right, So Far.—As long as I have one colony left and the BEE JOURNAL continues so far to excel all others, I shall take it. I put into winter quarters, the fall of 1880, 30 colonies, caps packed with rags, hives set under a shed boarded up tight on the west and north, and about 18 inches of straw packed between the wall and hives; came through with 20 colonies strong in honey, but weak in bees. They carried in pollen April 18th and built up rapidly from that time. but the drouth came just in time to find the hives crowded with young bees, which had nothing to do but consume what they had gathered from white clover. They swarmed but little, increased to 28 colonies, and went into winter quarters in the same manner that I packed last winter, and seem to be doing well so far.

G. W. PAGETT.

Oxford, Ind., Feb. 9, 1882.

Recipe for Making Paste.—Make a thin batter of best wheat flour, stir this into boiling water, on a slow fire; when cooked, or thick, take from over the fire, and to each quart stir in 2 ounces of New Orleans sugar or molasses, while hot. This paste will adhere as well to a non-porous surface as to a porous one. Keep in a cool place. C. HAUCKE.

Greenup C. H., Ky., Feb. 6, 1882.

Bees have had Frequent Flights.—I have been making very close observations in reference to color of bees and their qualities for honey gathering, disposition in handling, hardiness, prolificness and beauty. My bees are of the lightest strains, with but few exceptions. I keep the darker ones in my Southern apiary; the light ones at home. I will give the results of my investigations to the readers of the BEE JOURNAL soon. Bees are wintering finely. I have 135 colonies in good condition, on the summer stands. The weather has been fine, with mercury above zero all the winter. The bees have had flights nearly every week. The prospect is good for the coming season. L. J. DIEHL.

Butler, Ind., Feb. 8, 1882.

Bees Doing Well.—I put about 40 colonies of bees in my cellar on Christmas day, and left 6 colonies on their summer stands. All are in fine condition. Those left out-of-doors have had frequent flights, and for the last 2 or 3 days have been carrying in pollen from soft maple. The weather is warm, being more like May than February. I. P. WILSON.

Burlington, Iowa, Feb. 15, 1882.

Prospects Brighter.—Last winter was so disastrous to my bees that I was ashamed to report my losses, after pronouncing my bees all right in March. My bees did so well last season, however, that I am getting reconciled. My honey crop averaged 150 lbs. for each colony that I saved from the wreck, and the increase by division was 200 per cent. Now, with a bee house built on the plan described by Mr. Greening, in No. 29 of last year's BEE JOURNAL, and better preparation of each colony last fall, I hope to report all my colonies fit for duty at next spring's roll-call. I have never had time to attend any of the Conventions, but promise myself in the near future the pleasure of taking yourself, Prof. Cook, and other bee-masters by the hand, and thank you all for much instructive and valuable information I have received by the perusal of your communications.

F. T. BOUTEILLER.

Belle River, Ont., Feb. 9, 1882.

Cold.—Bees all right so far. They are getting a good fly to-day. An 18 inch snow fell on Saturday last which is melting rapidly. The coldest here this winter was on Jan. 24—2° above zero. The BEE JOURNAL comes regularly and is appreciated. Generally reaches me on Friday of each week.

J. W. CARTER.

Pleasant Dale, W. Va., Feb. 8, 1882.

The Langstroth Hive.—I have tried four different patent hives for many years. The first was the Langstroth. They were all tried side by side with the Langstroth, and I found that the Langstroth was the best for all purposes, so I transferred all of my bees to this hive; therefore, I think that Mr. Heddon's advice is perfect, sound and provable. WM. ROBERTS.

Vaughansville, O., Feb. 14, 1882.

Wintering Well in Chaff.—I put into winter quarters 60 colonies, packed in chaff. All had a depth of 6 inches of chaff over the bees and inside of the cap. Previous to Jan. 26th they were not out for 5 weeks, but on that date they had a good flight. I discovered then that one had starved by clustering in one end of the hive and leaving plenty of honey in the other, that they could not get to, on account of the cold. On Feb. 6th the mercury ran up to 62° in the shade. Taking advantage of this, I opened every hive and found all in fine order; there was capped brood in a good many of the hives. We are having remarkably fine warm weather for this time of year. C. W. MCKOWN.

Gilson, Ill., Feb. 9, 1882.

Packed in Chaff.—Bees are wintering here finely. They enjoyed a good fly on the 6th inst., and one Dec. 18th. I have 146 colonies packed in chaff; all but 2 are in good condition. I am surprised at the reports of the extreme cold East. Seven degrees above zero is the coldest we have had.

H. D. BURRELL.

Bangor, Mich., Feb. 10, 1882.

Spring-Like.—I send herewith some sprigs of smilax with bloom. My bees have had some grand and glorious flights the last few days. Some got into my plant house and gathered honey and pollen from smilax, etc. Robin red-breasts and blue birds greeted me this morning, the first time this season. The weather is like spring. What a difference between this and last season.

H. S. HACKMAN.

Peru, Ill., Feb. 14, 1882.

Dairy versus Apiary.—I write to draw out from some source how much the apiary detracts from the dairy. It is well known, by observing dairymen, that bees take from their pastures some of the richest and choicest elements of their milk and butter, and the savory sweet and nourishing qualities from their beef and mutton, and their cows give, so to speak, skimmed milk when pastured near large apiaries. We have all noticed a vast difference in the savory elements of milk, butter, beef and mutton, and think the scientists will attribute a part to the depredations of the honey bee. I should like to hear through the BEE JOURNAL from some one versed in agriculture, as well as the apiary, about our bees depredating on the dairy. I have 50 colonies of bees in the cellar in good condition. I lost 8 colonies last winter out of 35, leaving 27 last spring, some very weak. I increased to 50, and took off about 500 lbs. of section honey, and called it a very poor year. Our bee pasture is mainly white clover; the quality of honey is good, and sells at 20 and 25 cts. per lb. I am well pleased with the present form of the BEE JOURNAL. When Jan. 1, 1882, came, I had 52 numbers (none lost), making a large book.

ALVAH REYNOLDS.

Oneida, Ill., Feb. 6, 1882.

Bee-Keeping in Georgia.—Bees have had a flight nearly every day during winter, and there were but few days that they have not carried in pollen. In examining a few colonies on the 10th inst., I found all of them breeding finely, some of them with brood in 5 frames. Should they get no set back, they will swarm in March. Drones are nearly developed. The present size of the BEE JOURNAL I admire, and also the manner in which it is edited. I have not sent anything for publication in it lately, seeing that you had plenty that was much better, but please do not think I have forgotten the old AMERICAN BEE JOURNAL—long may it and its editor live.

A. F. MOON.

Rome, Ga., Feb. 10, 1882.

Mild Winter.—The winter has been a remarkably mild one, and well calculated to bring bees through in good shape. My bees were carrying in pollen last Monday.

H. H. LITTELL.

Louisville, Ky., Feb. 17, 1882.

Bee-Keeping in Utah.—Cache valley is about 100 miles north of Salt Lake City, some colder, and subject to early and late frosts; much healthier. We have not many bees here yet, but what we have are doing and paying well. We use the Kidder hive as yet. A colony of Italian bees in the Kidder hive will sell for about $14; extracted honey about 25 cts. per lb. My report from the county was 70 pounds to the colony—a little over 6,000 pounds. I am satisfied if we had more experience and your modern improvements, we could do better. We will keep working at it till we get them. I guess you can appreciate the feelings of a young bee-keeper. Our bee pasturage is good—plenty of sweet, red and Lucerne clovers, and about 2,000 acres of willows. I winter on the summer stand, using stable manure and some sawdust, piling them beneath, at the sides, back and on top, and leaving the entrance clear. On the 1st of May they are ready for swarming. We generally increase two from one. Some years past we have been troubled with foul brood. The County Courts have appointed Commissioners to inspect and destroy foul brood wherever found, and they are doing a good work. The Courts impose a heavy fine on any one who refuses to destroy the infected hive. Though new, our county realized $20,000 from honey alone.

GEORGE HIBBARD, Bee Com'r.

Logan, Utah, Jan. 22, 1882.

Young Bees.—To-day, Feb. 3, I looked over all of my bees, as it was warm, and they had a good flight. I found them in excellent condition, strong in bees, and several had commenced to rear brood; one having brood on two frames, and some were hatching out. Some had hatched. I have 28 colonies, all in chaff hives. I find a scarcity of pollen in all of my colonies.

L. C. MCFATRIDGE, M. D.

Carroll, Ind., Feb. 3, 1882.

THE AMERICAN BEE JOURNAL

RATES FOR ADVERTISING,

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance:

For 4 weeks		10	per cent. discount.
" 8 "		20	" "
" 13 "	(3 months)	30	" "
" 26 "	(6 months)	40	" "
" 39 "	(9 months)	50	" "
" 52 "	(1 year)	60	" "

Discount, for **1** year, in the Monthly alone, **25** per cent., **6** months, **10** per cent.

Discount, for **1** year, in the Semi-Monthly alone, **40** per cent., **6** months, **20** per cent.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

Transient Advertisements payable in advance. —Yearly Contracts payable quarterly, in advance.

THOMAS G. NEWMAN,
974 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

◆

The Apiary Register devotes 2 pages to each colony, ruled and printed, and is so arranged that a single glance will give a complete history of the colony.

For 50 colonies	(120 pages)	$1 00
" 100 colonies	(220 pages)	1 50
" 200 colonies	(420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Honey as Food and Medicine.

We have just issued a new edition of our pamphlet bearing the above title. It has been revised and enlarged from 24 pages to 32, the new pages being devoted to *new* Recipes for Honey Medicines, as well as all kinds of cooking in which honey is used.

It is undeniable that *pure honey* is the simplest, the healthiest, the most natural, and the most strengthening article of food for healthy persons, as well as the best remedy for the sick; and for the convalescent it is the true balsam of life, to restore them to their wonted strength and health.

What is needed is to educate the community up to this idea, and in no way can that be done so well as by directing their attention to the merits of honey.

This little pamphlet should be scattered by thousands all over the country, by honey producers. In this way it will *create* a home market in almost any locality.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

When 100 or more copies are wanted, they will be sent by express, at the expense of the purchaser.

◆

CLUBBING LIST FOR 1882.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal,	$2 00	
and Gleanings in Bee-Culture (A.I.Root)	3 00	2 75
Bee-Keepers' Magazine (A.J.King)	3 00	2 60
Bee-Keepers' Instructor (W.Thomas)	2 50	2 35
The 4 above-named papers	4 50	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00	2 80
Bee-Keepers' Guide (A.G.Hill)	2 50	2 35
Kansas Bee-Keeper	2 60	2 40
The 7 above-named papers	6 30	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25	3 00
Bees and Honey, (T. G. Newman)	2 40	2 25
Binder for Weekly, 1881	2 85	2 75
Binder for Weekly for 1882	2 75	2 50

◆

☞ We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal.

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

☞ O. H. Townsend has moved from Hubbardston to Kalamazoo, Mich.—the latter now being his address.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

When you have got an old horse that has passed the market period, apply a bottle of Kendall's Spavin Cure and the result will be marvelous. Read advertisement. 5w4t

ONE-PIECE SECTIONS a specialty. Pound size, $4.50 per 1,000. L. Hives 50c. each in the flat. BYRON WALKER, Capac, St.Clair Co., Mich.
8sm12t p

DODGE'S FEEDER
STILL AHEAD!
Sample by Mail .... 30c.
Per dozen, by express $2 00
Catalogue and Price List of Bee-Keepers' Supplies and Small Fruit Plants, free to any address.
8w4t **U. E. DODGE**, Fredonia, N. Y.

1882.-ITALIAN QUEENS.-1882.
I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby Smoker for $1.50. Address all orders to
L. J. DIEHL,
(Money Order Office)—Butler, Dekalb Co., Ind.
8w6m

D. A. PIKE, Box 19, Smithsburg, Wash. Co., Md., breeder of those **Beautiful Albino and Italian Queens and Bees**, which gave universal satisfaction last season. Send for circular, 8sm6t

Fdn. GOODRICH'S Foundation Fastener.
A Simple Machine
For FASTENING COMB FOUNDATION to the TOP AND ENDS OF BROOD FRAMES, OR IN SECTION BOXES, securely and rapidly. Send for circular. **S. GOODRICH,**
8wtf **Urbana, Ill.**

ITALIAN QUEENS AND BEES,
and FINE POULTRY EGGS for sale. Send for price list. **J. F. KIGHT**, Poseyville, Ind.
8w6t

DON'T FAIL
To try the NEW DEANE SYSTEM this season. Only **50 cts.** in stamps for a sample set, sent by express, at buyer's expense, or **30 cts.** in stamps for exact dimensions of that and the Star Chaff Hive. **C. H. DEANE,**
8w1t Mortonsville, Woodford Co., Ky.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Feb. 20, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The market has an upward tendency, and I am now paying the following prices in cash: Light comb honey, in single comb sections, 17@21 cents; in larger boxes 2c. less. Extracted, 8@10c.
BEESWAX—Prime quality, 18@22c.
AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

I pay 8@11c. for extracted honey on arrival, and 16@18c., for choice comb honey.

BEESWAX.—18@22c., on arrival. I have paid 25c. per lb. for choice lots. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb, in 1 to 1½ lb. sections, 20@22c.; same in 2 to 3 lb. boxes, 17@20c.; dark and mixed, in 1 to 3 lb. boxes, 12½@15c. Extracted, white, 10@11c.; dark, 9c.
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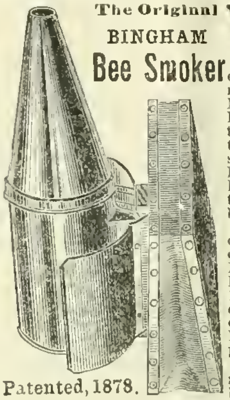

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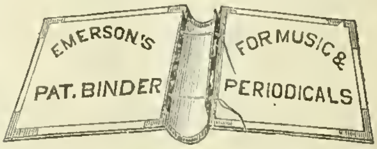

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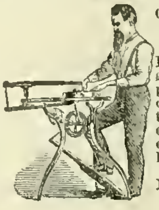

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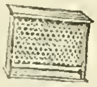

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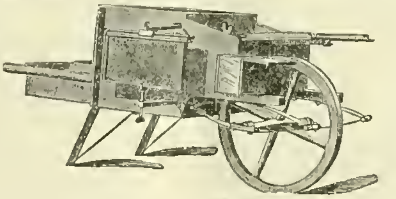

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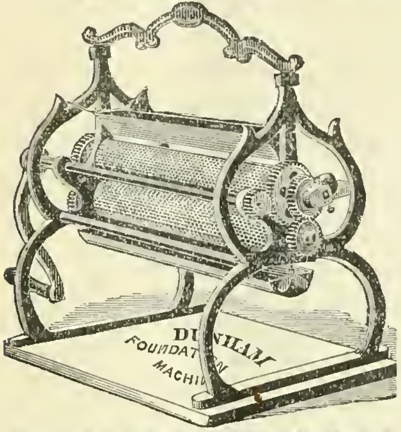

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TOPICS PRESENTED THIS WEEK.

Editorial—

Goodrich's Foundation Fastener........... 129
New Publications........................... 129
Bees and Fruit............................. 130
Manum's Section Gluer...................... 130
Gone to the Land of Flowers................ 130
Items...................................... 130

Among Our Exchanges—

The Use of Crowders........................ 131
Seasonable Hints........................... 131
The Little Pets............................ 131
Bees as Fertilizers of Flowers............. 131
Keeping Bees in Paris...................... 131
Items...................................... 131

Convention Notes—

Eastern N. Y. Union........................ 132
Local Convention Directory................. 132

Correspondence—

Producing Comb Honey—No. 2................. 133
Bee-Keepers' Compass....................... 133
Talk about Sundry Bee-Matters.............. 134
Experience with Cyprians................... 135
Salicylic Acid and Foul Brood.............. 135
Bee Items from Mississippi................. 135
One-Piece Section Boxes.................... 136
Do Swarms Pursue a Straight Line?.......... 136
The New Bees, Queen-Rearing, etc........... 137
Another Partial Review..................... 137

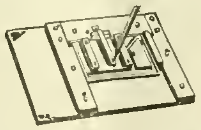
Selections from Our Letter Box—

Sweet Clover............................... 137
Successful Wintering....................... 137
Bee-Keeping for Profit..................... 138
A Bee Cellar............................... 138
Poultry in the Apiary...................... 138
Bees Breeding and Gathering Pollen......... 138
Hill's Winter Bee-Hive..................... 138
To Cleanse Wax............................. 139
Marking Location Anew...................... 139
Bees in West Tennessee..................... 139
Dysentery and Wintering.................... 139
Dead Brood................................. 140
Winter Feeding............................. 140
Lots of Pollen, but no Brood............... 140
Wintering Bees............................. 140
The Patent on One-Piece Sections........... 140
Superseding Queens......................... 140

Goodrich's Foundation Fastener.

We stated last week we had received one of the above machines for a place in the BEE JOURNAL Museum. The following is an account of its inception and completion, as furnished us by Mr. S. Goodrich. The cut will convey a very accurate impression of the appearance of the machine:

I have been looking in the columns of the JOURNAL for the last two years for some practical method of fastening foundation comb in the frames, but so far have seen nothing very satisfactory. Last spring I concluded there could be a machine made that would fasten it, and do it much more rapidly than by any of the old ways, of rubbing down with a stick, or fastening with hot wax. I had one machine made, but when I came to put it to practical use, I found it defective in some points (as the first experiments generally are), yet it fully met my most sanguine expectations, as far as fastening to the top-bar, but I wanted the comb fast to the ends, as well as the top. This it would not do, so I took the old plan of fastening the comb to the end pieces by the rubbing-down-process. I found that I could put a full, large swarm upon these frames without any trouble from breaking or getting out of shape, not having one fall during the season out of about 65 colonies that I used them in.



Goodrich's Foundation Fastener.

Not being entirely satisfied with what I had, I took a model and called on Rev. Salisbury, and between us we have made a machine carrying out my plans for fastening the foundation to the top-bar and ends of the frame with only two motions, and pressing the wax firmly to the frame. I cannot tell how many sheets can be put in per minute, from the fact of its being too cold to work wax, unless we have a very warm room, which we did not have; but judging from the machine I worked last summer, fastening only to the top-bar, I think I am safe in saying that when the wax is cut ready for the frame, that I can put in 3 or 4 per minute. We do not know whether there is anything of the kind in use or not.

The machine deposited in the BEE JOURNAL Museum, is without the attachment for fastening foundation in sections. Mr. Goodrich informs us by letter that the latter has been added, and works perfectly satisfactory.

New Publications.

The following new seed catalogues are received:

F. E. Fassett & Bro., Ashtabula, O.
E. B. Underhill, Poughkeepsie, N. Y.
Jas. J. H. Gregory, Marblehead, Mass.

Of apiarian price lists for 1882, we have the following:

Edward B. Beebe, Oneida, N. Y.
J. A. Osborne, Rantoul, Ill.

Mr. G. T. Athern, Latrobe, Pa., has sent us the initial number of *The Reveille*, a semi-monthly devoted to the interests of the G. A. R.

◆

☞ A subscriber in Ontario, sends us a sample of iron wire, and inquires if it will answer for wiring frames for foundation? It will not; use only plated or tinned wire, No. 30 to 36. We have several samples of foundation with plain iron wire, and in every instance corrosion has taken place.

◆

☞ W. C. R. Kemp, Orleans, Ind., has sent us a new smoker. It has the usual bellows; the fire-pot is conical in shape, about 3½ inches diameter at the base, and a syphon connected with the bellows makes of it a cold-blast.

Bees and Fruit.

The New York *Tribune* of Feb. 15, contained the following item in an article headed "Keystone Horticulture," which briefly reported the doings of Pennsylvania fruit-growers in council:

"Many members expressed sentiments unfavorable to bees; one remarked that he saved $500 worth of fruit in one year by dispensing with his honey-makers. Mr. Meehan said he had positive evidence that bees are most destructive to the grape-grower when the supply of flowers is insufficient for their needs. Others gave similar testimony, and also that they do great damage to the pear crop. Inclosing grape bunches in paper bags, as protection, had several warm advocates. Of this new system all seemed to agree as to its efficacy in preventing insects from puncturing the fruit, but especially for its absolute protection against rot and various forms of fungoid disease. The cost of the ordinary grocers' two pound paper bags, and placing them over the bunches, is trifling compared to the advantage of magnificent bloom, beautiful color and excellent flavor which the covering tends to secure."

This is altogether the most exaggerated indictment against the honey-gatherers that we remember to have met with. But we doubt if that grand jury, THE PEOPLE, will find a true bill against the bees, when the evidence comes to be sifted. Mr. Meehan is high authority on horticultural matters, but we are compelled to challenge his "positive evidence" as to the injury done by bees to grape blossoms. It has been pretty clearly demonstrated that the birds do the mischief to ripe fruit. They puncture the skin, and the economical bees only gather up the luscious juices that would otherwise go to waste. As to the bees harming blossoms, this is the first time we have known this charge laid against them. It is generally supposed that they do good in the fructification of fruit-blossoms; that, in fact, they marry the flowers, and make their nuptials prolific.

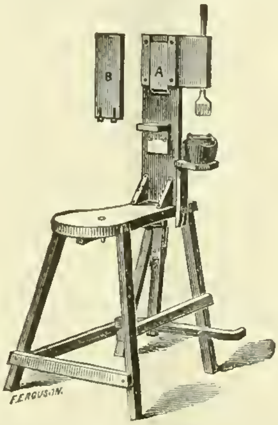
We hope the paper bags will be found an effective protection, but should they ever be ripped open, the blame will have to be attributed to the beaks of birds, and not to the mandibles of the bees.

It is rather remarkable that side by side with the forgoing indictment against the bees, thus presenting bane and antidote in parallel columns, the following paragraph appears:

"There is no one simpler or better way of fortifying a child's mind against evil allurements than to teach him or her how to gather and plant seeds of those pure and lovely hardy flowers the phloxes, which are to be found everywhere in countless variations. They may be sown in a frame in March or in the open garden in April or early May, and if set thinly and kept clean will show their blossoms and the variations of pattern and color, but all bright and charming, the following September. Then will be the time to point out how the bees, by carrying the pollen from one plant to another, cause the mingling of varieties and origination of new ones, and how men-hybridizers of grapes, potatoes, wheat, flowers, fruits, etc., imitate them to great advantage. The child will see the bees dusted with pollen; can mark fingers or noses with the yellow dust; and if there is a microscope at hand can see how curiously the pollen grains of different sorts of plants differ."

Manum's Section Gluer.

This is a machine for gluing the dovetailed sections, which has just been made by Mr. A. E. Manum, of Bristol, Vt. It weighs only 35 lbs. when boxed. Strength in sections for marketing honey is a necessity, and we are glad to know that "inventive genius" is at work endeavoring to produce a machine to accomplish this as cheaply and rapidly as possible. No matter how accomplished, we want a *strong* section to keep the comb honey intact and prevent leakage. Mr. Manum thus describes his invention:



"My lightning dovetail gluer works to my satisfaction. It is very simple, durable, and easy to operate. A person can put togother from 1,200 to 2,000 sections per day with it, and glue them. One of my men has put together with this machine 5 sections in 1 minute. It is worked by the foot, the operator sitting astride the seat. The plunger, to which the glue-pad is attached, has an automatic motion, and makes a dip into the glue at every downward motion of the treadle."

Gone to the Land of Flowers.

Mr. A. T. Williams has moved from St. Charles, Mo., to Gretna, La. He is well-known to our readers as a successful and progressive apiarist. The St. Charles *Cosmos* says he "took with him 250 colonies of bees," and adds:

"He proposes to follow up his specialty of bee-raising in that land of flowers. He has resided in this county for six years, and has made an enviable record, not only as a thoroughly proficient apiarist, but also as a gentleman in his business and social relations. He will take his family with him to New Orleans and will make the Pelican State his home."

Since arriving in Louisiana he wrote as follows from Gretna, La., on Feb. 14, 1882.

I left St. Charles, Mo., and brought a part of my two apiaries to this state early in December. I brought over 200 colonies, and lost only 1 in shipping. My bees were closed up over 3 weeks. I shipped them by steamboat. I am located now, with my bees, about 10 miles above New Orleans, La., on the west bank of the Mississippi river, and about 2 miles from the river, in the edge of the swamp. The location is a good one, I think, orange groves and white clover in front, soft maple, willow, and a vine called Back Jack, in the rear. There is no end to the white clover here, but bees don't take to it as they do in the North; it has been blooming sparingly for a month. The willow, early variety, has been in bloom 10 days. About 100 colonies have commenced work in the boxes. I have 100 Cyprians, and about the same of Italians. I will try and give the two races a fair trial, and report in due time to the BEE JOURNAL.

CLUBBING LIST FOR 1882.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A. I. Root)	3 00..	2 75
Bee-Keepers' Magazine (A. J. King).	3 00..	2 60
Bee-Keepers' Instructor (W. Thomas)	2 50..	2 35
The 4 above-named papers	4 50..	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A. G. Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 7 above-named papers	6 30..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) ..	2 40..	2 25
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

☞ Several correspondents in Michigan, on Feb. 23, reported snow 6 inches deep, with more coming; the mercury being 20° above zero.

☞ *Gleanings* says: Upon inquiry of one of our best physicians, I find that the poison from the sting of the bee is one of their most potent remedies for a certain class of diseases.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Bees as Fertilizers of Flowers.—The Chicago *Herald* very truthfully remarks as follows:

It is a well known fact that bees fertilize fruit blossoms by mixing the pollen, thereby making the fruit trees and shrubs produce more and much better fruit than they would without the visits of the bees.

Honey is the purest and most healthful sweet known to man, and should be used in every family in place of the great abundance of adulterated sugars and syrups. The management of bees improves the mind and enlarges the power of observation, and when properly cared for liberal returns are realized for the outlay. There has been great progress in apiculture in the past few years, so much so that an apiarist of 10 years ago would be decidedly behind the times if he has not kept pace with the progress that has been made.

The Use of Crowders.—Mr. E. E. Hasty, in the *Bee-Keepers' Exchange*, thus describes their use in his Gallup hives:

I just don't know whether crowders have ever been used by other folks or not. The general reader, at least, will want a definition at the outset. What is a crowder? A square bit of ordinary board inserted into the combs at the bottom of the frame, to prevent brood being reared there, i. e., to crowd the brood close up to the top bar. Why crowd the brood upward? To bring the brood nest and the sections closer together, that the workers may be more ready to commence storing surplus. The flat frames are an advantage over the square ones, in that the top sections can be placed much nearer the brood. By crowding the brood nest up, the square frames can be put on nearly an equality with the shallow ones in that respect, and that without sacrificing the advantage previously held.

I have only been using this innovation the present season, and not beginning their use very early in the season, I am not ready to make a decided report, as to whether or not they pay for the trouble of putting them in. I am favorably impressed with them, however, and purpose to use them in most of my Gallup hives next summer. Only three frames in the hive need to be crowdered. If brood is carried up to the top in one frame, the tendency is to carry it up into the adjoining one also. Thus three crowdered frames, alternated with four ordinary ones, crowd up the brood for seven frames. Outside of these, brood is not very likely to be carried to the bottom any way, unless it is to get a place to rear drones.

Now as to the manner of insertion. From ordinary ⅞ lumber saw out blocks 3x3¾ inches. Choosing frames that have some drone comb, or some badly made comb at the bottom, cut away the lower portion clear across, so as to leave an open space just a little scant of 3¾ inches. Into this vacancy press three of the blocks, spacing them equal distances apart. The design is to have the bottom as open as possible for the passage and clustering of bees, and yet to have just block enough in to prevent any pieces of comb being started there. To make all secure, draw a piece of fine wire around the bottom of the frame laterally, to keep the blocks from being moved out of place. When the bees have built the blocks fast to the edge of the combs, as they will soon do, the wire can be taken off. If one block 3¾x5 was put in the center I presume that the comb in the lower corners of the frame might be left. Usually, however, there is some empty space in the corners which the bees are prone to use for building drone comb, and putting the crowders clear across stops that game. For other frames than the Gallup the size of the block must of course be varied. I am not sure but the Langstroth frame might be crowdered up to five or six inches with good effect; but as yet I have made no experiments in that direction.

Seasonable Hints.—Mrs. L. Harrison, in the *Prairie Farmer* gives this "bee gossip:"

Bees thus far have wintered well, and to-day, Jan. 11, were busy cleaning house. They are not like some housekeepers, who leave decayed fruit and vegetables until summer, before removing them; for if a mild day occurs, they carry out all the dead bees and debris, thus keeping their hives clean and sweet. Sometimes the entrances to the hives get closed with dry leaves or dead bees, and, if not removed, result in the destruction of the colony. It is a little thing to take a wire or little twig and clean out the entrance to a hive, yet even this small attention may save the life of a valuable colony.

A leaky roof should not be tolerated in any apiary. Paint well applied pays good interest in preserving hives from decay and dampness, and might be brushed into cracks and upon the surface during mild days. We once visited a prosperous apiary where each hive had an extra covering of sheet iron, and which was turned up at the lower side, forming a gutter to carry off the rain.

As bees are active during mild winters they consume much honey, and all those who neglected to feed their bees in the fall should see that they do not starve. In some localities the fall pasturage was abundant, and bees were able to secure ample stores, in others this failed. Some writers claim that syrup made of granulated sugar is the best winter feed, but if this is so, why did not their Creator teach them how to make it, instead of gathering honey from flowers?

The Little Pets.—The Rev. John Irving, Md., delivered a lecture in Kining Park, Scotland, lately. A Scotch paper remarks as follows concerning it:

After describing the history of the bees and their workings very minutely, Mr. Irving said that of all the creatures we are in the habit of making pets of he knew of none more interesting or whose acquaintance is better worth cultivating than the bee, and at the same time he knew of none which has received more ignorant treatment at the hand of man. After giving an interesting sketch of bees and their daily work, he described the use of a bar-frame hive, which he exhibited, also comb foundation, the honey extractor, and other appurtenances connected with apiculture. The lecture was illustrated by enlarged and colored microscopic views of bee anatomy.

Keeping Bees in Paris.—A telegram from Europe states as follows:

The practice of keeping hives of bees in the streets of Paris has spread so extensively that the Prefect of Police has issued an order forbidding it for the future, except in the case of persons who shall have received a special authorization. The preamble of the decree represents the great danger to the population of the existence of so large a number of bees in the neighborhood of the markets, schools and refineries, as well as the opinion of the Council of Public Health of the Department of the Seine condemning the practice.

☞An exchange remarks: The use of honey should become so common and general that a honey store or depot would be found profitable in every large town. If every family in the land would make honey an article of daily use, in place of the unhealthy syrups, then all concerned would be benefited.

☞A meeting of the bee-keepers of New Jersey will be held at Hall No. 25, Albany street, New Brunswick, N. J., March 15, 1882, at 10 a. m., to organize a State Bee-Keepers' Association. All interested are cordially invited. G. W. Thompson, Stelton; C. H. Rue, Manalapan; J. H. M. Cook, Caldwell, Committee on Call.

☞The Texas State Bee-Keepers' Convention will be held at McKinney, Texas, on Tuesday, April 25, 1882.

☞The Champlain Valley Bee-Keepers' Association will hold their semi-annual meeting at Middleburg, Vt., May 11, 1882. T. BROOKINS, *Sec.*

☞The Marshall County Bee-Keepers' Association will meet at the court house in Marshallton, Iowa, on Saturday, March 4, 1882, at 10 a. m.

J. W. SANDERS, *Sec.*

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

March 15—New Jersey State, New Brunswick, N. J.

April 11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.

19, 20—Tuscarawas and Muskingum Valley, at Coshocton, O.
J. A. Bucklew, Sec., Clarks, O.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May — —Champlain Valley, at Bristol, Vt.
T. Brookins, Sec.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Eastern N. Y. Bee-Keepers' Union.

This Society held its ninth semi-annual Convention at Central Bridge, Schoharie county, N. Y., on the 10th and 11th of Jany., 1882. The meeting was called to order by President W. D. Wright, at 10:35 a. m. The Secretary's and Treasurer's reports were read and adopted.

The following officers were elected for the ensuing year: President, W. L. Tennant, Schoharie, C. H., N. Y.; Vice President, S. Vroman, Seward, N. Y.; Secretary, Chas. Quackenbush, Barnesville, N. Y.; Treasurer, Zadok Brown, Esperance, N. Y. Also the following honorary Vice Presidents: Benj. Van Wie, Cobleskill, N. Y.; Jas. Markle, New Salem, N. Y.; Isaac G. Quinby, Quaker Street, N. Y.; Theodore Houck, Canajoharie, N. Y.; J. W. Mallory, Worcester, N. Y.; I. Nickels, North Harpersfield, N. Y.

AFTERNOON SESSION.

A committee, appointed by the President, consisting of S. Vroman, W. D. Wright, and Theodore Houck, reported the following questions for discussion:

1. What size honey-box is the most profitable for the producer?
2. What kind of comb foundation is best for use in surplus boxes?
3. What is the best method of introducing queens?
4. Which is the most profitable: side and top boxing, or top boxing alone?

Discussion of the above subjects as follows:

W. D. Wright. I have been using the 2-lb. box, and do not want anything smaller; I think I can get more honey, with much less labor, than with the 1-lb. box. I have all the fixtures for the use of the 2-lb. box, and shall continue to use it.

S. Vroman. I have been using both 1 and 2-lb. boxes; use the 1-lb. box because they sell in market more readily and for a better price; but think I can get a little more honey using the 2-lb. box. I shall continue the use of both another season, and compare the two more closely as to the amount produced.

M. D. West. I have been using the 2-lb. box, and think it is the most profitable, as I can secure more honey by its use than by using smaller ones; but if I was going to change, I would change to the 1-lb. box.

President Tennant delivered quite a lengthy address on the different sizes of honey boxes, as to the difference in the cost of the 1 and 2-lb.; the cost being only about ¼ less for the 1-lb. than for the 2-lb. box. The extra amount of labor and expense it would require to prepare the 1-lb. box for use after being filled, taking just as long to clean and glass a 1-lb. box as it does a 2-lb. box, and many other remarks in favor of the 2-lb. box.

Theodore Houck thought there could be more honey disposed of, and at better prices, by using the 1 and 2-lb. boxes; that the working class of people in the large cities would often buy honey in the 1 lb. box, when they could not afford to buy 2-lbs, and, therefore, thought the 1-lb. box brought it within reach of the poorer class.

President Tennant then called on the balance of the members present to state the kind of box each used. A short experience from each member showed that there were many different sized boxes in use, but all held nearly the same amount of honey—from 1½ to 2¼ lbs, averaging nearly 2 lbs, or what would be termed a 2-lb. box. After the conclusion of the discussion, a vote was taken to ascertain the sentiment of the Convention, which was unanimously in favor of the 2-lb. box.

Question No. 2 was next taken up, which showed quite a difference of opinion among members, as follows:

S. Vroman had at first used the Root, in three-cornered starters; but of late has used the VanDeusen flat-bottom in full sheets, to his entire satisfaction.

W. D. Wright had also used Root in small starters, but of late has used VanDeusen flat-bottom in full sheets.

W. L. Tennant had used Root foundation in small quantities, but has used mostly VanDeusen and Vandervort, and think these are among the best in use, and shall continue to use them the coming season, weighing about 10 square feet to the pound.

J. J. Bivens had used both kinds on one hive—the Vandervort and VanDeusen—and the bees would fill the boxes which contained the Vandervort, and leave the flat-bottomed untouched.

Zadok Brown said his bees would work quicker on foundation than they would on natural comb. The President again called on each member present to state the kind he used; there was quite a large number of beginners that had not used foundation of any kind, while those that had were the same as already mentioned.

SECOND DAY—MORNING SESSION.

The next question for discussion being, which is the best method of introducing queens? Vice President Vroman gave a short address on the subject. He had tried various methods, and favored introducing as soon as the colonies are deprived of a queen—has no particular method.

Theodore Houck had introduced about 1,000 queens during the last two years, with good success, and had in most cases introduced immediately after depriving the colony of their queen. Had used the Peet cage almost wholly, and thought the best time to introduce queens was just when the bees found out they were without a queen; and in order to do this successfully, would first cage the queen in the Peet cage and fasten it on the comb, according to directions, and pull the tin slide out, giving the bees a chance to release her by gnawing through the comb on the under side of the cage, and in most cases they will at once accept her.

Zadok Brown said he had some experience in introducing, and had partial success with the Peet cage.

It was universally conceded that the proper time was just after removing the old queen.

Question No. 4, opened by J. J. Banta. I have used side and top-boxes; but prefer top-boxing, and of late have used top-boxing alone; use 2-lb. boxes, 21 to the colony.

P. Palmatier. I have been using side and top-boxes, but shall discard side-boxes the coming season, and use top-boxes alone.

S. Vroman used broad frames and top-boxes; used them because he thought that top-boxes did not give surplus room enough for a good strong colony of bees; he did not like to discard the broad frame, as he was afraid he would not get as much honey.

A committee was appointed to act with the secretary to revise the constitution and by-laws of this Union, consisting of M. D. West, W. D. Wright, and J. J. Banta.

A vote of thanks was tendered to Theo. Houck for his display of apiarian supplies, such as smokers, honey-knives, bee-feeders, comb foundation, wire nails, queen cages, honey labels, etc.

The meeting then adjourned to meet again May 2d and 3d, 1882, at Cobleskill, Schoharie county, N. Y.

W. L. Tennant, *Pres.*
C. Quackenbush, *Sec.*

☞ The semi-annual meeting of the Tuscarawas and Muskingum Valley Bee-Keepers' Convention, will be held in the Town Hall at Coshocton, O., on April 19 and 20, commencing at 10 a. m. A cordial invitation is extended to bee-keepers everywhere.

J. A. Bucklew, *Sec.*, Clarks, O.

☞ The Texas State Bee-Keepers' Convention will hold its meeting at Judge W. H. Andrews' Apiary, at McKinney, Texas, April 25, 1882.

Wm. R. Howard, *Sec.*

CORRESPONDENCE

For the American Bee Journal.

Producing Comb Honey—No. 2.

G. M. DOOLITTLE.

In No. 1, I told you how I managed all the good, strong colonies I had in the spring, to get them in good working order for gathering honey by the time the harvest from white clover arrived. It often happens that all the colonies in an apiary are not thus strong, and as I am requested by several to give my method of treating the weaker ones, I will do so, although it will be somewhat of a repetition of what I have before written on the subject.

Several years ago, when I wished to unite weak colonies in the spring, I did so early in the season, for the "books" said that the time to unite was when it was discovered that two colonies were too weak to be of use alone, which generally happened in April. That uniting two weak colonies to make one strong one is profitable to the apiarist, no one will deny, (unless, perchance, we are obliged to use everything in the shape of bees, as we were last season, in order to get our former number back again after a heavy loss); still, that uniting must make the *one* better than each of the *two* would have been when the honey harvest arrives, or our labor of uniting is worse than useless. After practicing the plan given in the "books" for a year or two, I became convinced that colonies thus formed were no better, at the end of two or three weeks, than each one would have been had they been left separate. I have put as high as seven remnants of colonies together in April, the seven making a good large colony at the time, and in a month all were dead. After coming to the conclusion that I could not unite bees with profit in early spring, I adopted the following plan, which has proved successful so far:

About the middle of April, some cool evening, I look over all my bees by removing the cap and raising the quilt a little, so I can see how strong in bees the colonies are, and all that do not occupy five spaces between the combs are marked, and the first warm day are shut on to as many combs as they have brood in, and a division board placed in the hive so as to contract the hive to suit the size of the colony. Honey enough is provided to keep them amply for two weeks, and the rest of the combs I store away for safe keeping, unless some of the strongest of them are able to protect them from robbers, in which case I leave them outside the division board, so the bees can carry honey from them as they wish. The entrances are contracted so as to let but one bee pass at a time for the smallest colonies, while the larger ones do not have more than an inch in length of entrance given them.

The next work is to increase the brood as fast as possible in these small colonies. I keep them shut on the combs first given them till they are filled with brood clear down to the bottom, before they are given more room. As soon as this is accomplished, I give them a comb of honey prepared as I told you in No. 1, placing it between two full combs of brood. In about a week this comb will be filled with brood as full as the others. I go over them once a week in this way till I have five frames of brood in the strongest, when I take a frame of brood just hatching out from those having five full frames, and give it to the next strongest, say, one that has four frames, putting a frame of honey in the place where it came from. Thus, I keep working till all of them contain five frames of brood, which should occur from the 10th to the 15th of June in this locality. I now go to No. 1 and open it, looking the frames over till I find the one the queen is in, when it is set outside and the four remaining frames and all the adhering bees are taken to No. 2; I then spread the five frames in No. 2 apart so as to set the four frames brought from No. 1 in each alternate space made by spreading the frames in No. 2; No. 2 is now closed up and in a few days it is ready for the boxes. It will eventually make as good a colony for storing in boxes as the best of the stronger ones; at least such has been my experience so far. I have never known bees to quarrel, nor a queen to be harmed by this plan of uniting, as the bees are so completely mixed up that they do not know what to fight about.

But to return to No. 1, where the queen and frame of brood were left standing outside the hive. I now place this frame of brood back in the hive and put an empty frame beside it, adjusting the division-board, and I have a nice nucleus from which to get a queen to be used in swarming, as given further on. Many of the old bees carried to No. 2 will return, thus making a strong nucleus, which will fill the empty frame with nice straight worker comb in a few days, and still another, if the queen is left long enough. By-the-way, let me say that such colonies will build comb at a less expense than is required to purchase and fill frames with comb from foundation, besides the bee-keeper keeps such amount to expend on something more necessary to him than foundation for the brood frames. Now, if I wish no increase of colonies during the season, I serve my whole apiary as I did Nos. 1 and 2, beginning early enough to be sure that none have brood in more than five frames. By putting boxes on the strongest just before apple blossoms, and a few boxes are often filled from this source, as the bees must work in boxes if at all, when shut on five frames. It will be seen that I use nine frames to the hive, but the plan is the same with any number of frames. This having every frame in a hive crowded to the fullest capacity with brood two weeks before the height of the honey harvest, has much to do with a good yield of honey, I assure you. This is the condition I aim to have all my bees in, and I have tried to tell you how so you can do the same, if you wish to adopt the plan I follow. My next will be about preparing and putting on section boxes.

Borodino, N. Y.

For the American Bee Journal.

Bee-Keepers' Compass.

H. T. COLLINS.

In order to reach the haven where he would be, every bee-keeper, like the mariner, should be guided by a compass, and I herewith send a few ideas concerning one, in hopes that it may induce others to add their quota and "to box the compass" in their own way.

To simplify matters, this compass will not have as many points as the mariner's.

NORTH.—A choice queen. This is the pole star leading to success. She should be not more than two or three years old, and whose offspring must have the following traits: Longevity, which includes hardihood, industry, docility, and let us add beauty, if for no other reason, because it is a sign of good stock.

NORTHEAST.—Keep no scrub stock but supersede it, otherwise there will not be the opportunity of selecting these choice queens above mentioned.

EAST.—Strong colonies. As nature cannot provide her stores of boundless wealth without the daily rising of the sun, and the visit of his countless rays, so the blessed bees cannot "make boot upon the summer's velvet buds" unless they are strong in numbers, and abounding in courage.

SOUTHEAST.—Know at all times the condition of the hives. Do not be satisfied by *thinking* that that colony is prosperous, but find out by inspection, and if it needs your help, give it without delay.

SOUTH.—A comfortable home. That is, let the hive be shaded from too much sunshine in hot weather, and yet be so situated as to have a good circulation of air. To be *comfortable*, the hive must not be so restricted in room as to compel the bees to "lay out," nor so roomy as to afford more space than they can well occupy and guard. The bee-master can easily furnish this condition by means of that wonderful trinity of helps, the movable frame, extractor, and foundation. Only with a comfortable hive, and everything ship-shape can

"The busy bee *improve* each shining hour,
And gather honey *all the day* from every opening flower."

SOUTHWEST.—Provide bee-pasture. When this is done, it seems to me that a good many of our present troubles will be over. Colonies will then be in an active and normal condition during all the working season, much robbing, ill-temper, and "general cussedness" will be done away with, and the stock will go into winter quarters strong in young bees, and well supplied with sealed stores.

WEST.—Early provide for winter quarters. As the setting sun betokens the time for and the need of rest, so when

"The melancholy days are come the saddest of the year,
Of wailing winds and naked woods, and meadows brown and sere,"

then the successful apiarist makes all snug and safe for winter according to his best knowledge and ability. He sees to it that the colony has a young and vigorous queen, great store of young bees, and suitable food, be it honey or sugar syrup. He puts them into winter quarters in the cellar, or on their summer stands according to his locality and experience.

NORTHWEST.—A good and quiet rest. Do not disturb the bees more than is actually needed, while in winter quarters. If on the summer stands, have no rabbits and dogs, or other stock fooling around, and do not awaken them out of their quiet sleep, by jarring the ground, which is too often done by walking or driving near them.

Jacksonville, Ill.

For the American Bee Journal.

Talk about Sundry Bee Matters.

WM. F. CLARKE.

In common with all who have expressed themselves on the subject, I think the present size and "get up" of the BEE JOURNAL all that can be desired. It will make a very handy volume for reference when bound, and is not too large for the shelf of an ordinary bookcase. The editorial management also deserves high praise.

"THOSE FINE BEES IN CANADA."

Mr. Henderson hardly does me justice in complaining of my "failing to remember little Tennessee, or the name of that little Tennessean who furnished Mr. Sturgeon with those fine queens," I saw in the Kincardine apiary. Yet he had refreshed his own memory by looking at my communication in No. 29, July 20th. How then came he to say I had failed to remember "little Tennessee?" These were my words: "Mr. S. procured a dozen queens from Tennessee, I forget how long since, and also imported a few from Italy." Since I have been pulled over the coals for it, I am compelled to state in self defense, that Mr. S., for reasons best known to himself, requested me not to name "that little Tennessean." So I am cleared. I surmised that the dollar-queen business might have had something to do with his reticence, but may have been wrong. However, if all goes well, I shall sample Mr. Henderson's queens for myself, and then I can "speak in meeting" without let or hindrance. Mr. H. seems to harp on the word "tentative," used by me. I thought it was very modest and suitable. See its dictionary meaning.

MR. MACE'S KIND PROPOSITION.

Mr. Mace wishes experiments made with alcohol as a remedy for bee-stings, and as his "wife and father-in-law" think it would be "too much much like suicide" for him to try them, he kindly suggests that I make a martyr of myself in the cause of apiculture. This is considerably like Artemus Ward's disinterested willingness to have his wife's relations go to the war. I had thoughts of calling a family council in regard to the matter on first reading Mr. Mace's proposal, but fearing it might be decided that it was my bounden duty to suffer for the public good, I concluded to take the responsibility of acting for myself, I therefore beg to decline submitting to the proposed ordeal and would suggest that there are plenty of men fonder of whisky than I am, who would be quite willing to take a sting and a drink turn and turnabout, for the indefinite period indicated by Mr. Mace. I am not a rabid temperance man, still I think the remedy might prove worse than the disease. Alcohol has a sting as well as the honey-bee, and it would be a melancholy thing if any one were to begin using alcohol to antidote bee-stings, only to find out that, "at the last *it* biteth like a serpent, and stingeth like an adder." Let us ransack the entire pharmacopœia for remedial appliances, before we add another to the thousand and one excuses which people make for using spirits. For myself I get along passably well with veil and gloves, and after seeing a Cyprian colony sting Mr. Jones to their heart's content, and finally drive him into the bushes, I don't feel it any disgrace to wear them.

PROFESSOR COOK.

The Professor's nice little article on "Honest and kind criticism," in the BEE JOURNAL of Feb. 8, has taken quite a load of anxiety off my mind, but still, influenced by the curiosity which is natural to all the sons and daughters of Eve, I am aching to know who that apicultural ignoramus is. In Yankee phrase I would say, "du tell." The Professor promises to "explain more fully in regard to the pollen matter." There are other points that await explanation; that of "dry feces," for example.

N. A. BEE-KEEPERS' ASSOCIATION.

I thoroughly indorse your editorial remarks on the proceedings of the Northeastern Bee-keepers' in regard to the "National" organization, as you call it, but please remember, it is a *continental* body. Its name was given to it for the express purpose of including us Canadians, and though but few of us have ever attended its meetings, it must be remembered that Chicago is the nearest place to us at which it has ever been convened. We live in hope that some time it may be held at Detroit, Buffalo, or some border city, possibly in Toronto itself, and then you may look for a grand muster of bee-keepers from this side of the lines. Having assisted at the birth of the North American body, and watched its history closely ever since, I hardly think it is open to the charges made against it. At the outset there were little jealousies which it happily allayed, and all the meetings I have attended, have been pleasant reunions of kindred spirits. It has certainly done much to form and strengthen "a brotherly tie," and I would earnestly say, "destroy it not, for a blessing is in it." Perhaps it was not wise for the convention to endorse Mr. Bingham's views quite so fully. Still, I am sure there was no intention of robbing Mr. Quinby's honored brow of any of its well-earned laurels. I do not concur in the representation of Mr. Quinby's labors as belonging to the closing chapters of old-time apiculture. They helped largely to usher in the new era, and the eminent services of Messrs. Langstroth and Quinby (I don't know which should be named first in order of time), will go down to history as the "twin-brothers' yeast" that has leavened the whole lump of modern bee-keeping. I had the pleasure of knowing Mr. Quinby personally, and can fully agree with the graceful tribute to his memory penned by Captain Hetherington as a preface to the new edition of the "Mysteries of Bee-keeping." Mr. Quinby was himself so modest, that those who knew him best do well to guard his fame, still I think Mr. House has been unduly excited. No "heinous offense" has been committed; no "unjust discrimination" perpetrated, and I hope the kind words penned by yourself and others may have the effect of "oil on the troubled waters."

THE PRESENT SEASON.

I fear the "cold dip" we had about a month since has proved very destructive to bees. Here the thermometer went down to 30° below zero, and in some parts of Canada it was even lower. On Tuesday last, Feb. 14, it was mild enough for bees to fly, and I saw evidence enough in my own little apiary of the havoc done by the Arctic wave. Having no cellar or bee-house, I am wintering out of doors in chaff hives, with the exception of a single colony, which is in a plastered hive. The "cold dip" seems to have caught the bees suddenly. One colony was much spread out on the combs, and had entirely succumbed. Another, partially scattered, was reduced to great weakness, and others appear to have had the outer circle of the cluster chilled to death. This is my first trial of chaff hives, and I must own, I have serious doubts as to its suitability for the climate of Canada, unless, indeed, we thicken the walls.

PARLOR WINTERING.

This is a failure for the present season, but I believe I know the reason. The bees were not housed soon enough. There had been some cold nights before they were taken indoors, and I think a mere handful of bees once chilled through is not apt to recover. My little colonies never seemed lively, they acted as if they had the rheumatism, or a bad cold. They never fed to please me, and gradually dwindled away. So, Mr. Heddon will not have the pleasure of crowning me as a great discoverer just yet. But I am not discouraged.

My bees lived until the "cold dip," and in my absence the room was fireless. But for that, they would have survived longer. As it was, they lived two months in their little prison. If, under unfavorable circumstances, they lived two months, I argue that, under better circumstances, they may survive four. I have learned some lessons by this little experiment, which will enable me to improve upon it hereafter. That we shall find a way of applying artificial heat for the wintering of small colonies, is a cherished dream of mine, though I am free to confess that it may prove "but a dream."

Listowel, Ont.

For the American Bee Journal.

Experience With Cyprians.

L. JOHNSON.

I purchased an imported Cyprian queen from D. A. Jones in October, 1880. During the summer of 1881, I reared quite a number of queens from her, 14 of which I placed in full colonies in order to thoroughly test them. Several others I placed in the hands of bee-keepers who were capable of judging of their qualities. From these, as well as my own experience, I am able to form a pretty fair estimate of their character, etc.

1. The prolificness of the queens is quite noted, the imported mother, as well as daughters, keeping a large amount of brood until late in the fall; but their progeny seemed short-lived. The increase of bees in the hive was not equal to the amount of brood—Italian colonies not having so much brood, but increased in bees much faster. All winter long, since brood-rearing ceased, the Cyprians have dwindled rapidly. The bottom-board of most of them is often covered with dead bees, while but few are dropping from Italians. This characteristic was especially noticeable during November and December. Whether this feature will continue until spring, remains to be seen; but if so, there will be but a handful of bees to begin operations; but, as brood-rearing is now commencing with us, we hope the worst is over.

2. Their honey-gathering qualities are not equal to the Italians; or, if it is the vast amount of brood that consumed it so rapidly, that the show for surplus was poor indeed.

3. The hard name some have given Cyprians for irritability, has not been verified in my experience. They are quite nervous on first opening the hive, but soon quiet down so as to be easily handled; but if a few robbers are searching around, they soon become so much excited that all operations must cease. In all other points I see no difference between them and Italians. Taking the two races together, I shall certainly prefer the "old reliable" Italians, as bred by such men as Salisbury, Brown, Alley, and others. While I deeply sympathize with Mr. Jones in his earnest and expensive efforts to improve our bees by introducing these new races, yet I very much question the success attained. Undoubtedly, the bright color and beautiful form of the Cyprians will make them favorites with many, yet by carefully selecting our queen mothers among Italians, even this latter point may be rivaled if not excelled.

Each year I am more convinced that "that coming bee" will be the purest and best type of the Italian race.

Walton, Ky.

For the American Bee Journal.

Salicylic Acid and Foul Brood.

A. R. KOHNKE.

In reply to Mr. Jones' proposition, I must say that I am perfectly delighted with his article. We agree, it seems, on all but one or two points. Mr. Jones says salicylic acid does not cure foul brood, which cure I offered to prove. Mr. Jones did not accept my proposition, but has done the other thing, which I expected he would, to-wit: given us his remedy. I am very well pleased with that substitution; but having had no experience with the starvation cure, it will not do for me to say it can or cannot be done. Perhaps all contagious diseases can be cured by starving the subject infected. Bee-keepers have to choose now between three different remedies. 1st, starvation, 2d, borax and salicylic acid in water, 3d, salicylic acid in alcohol, proportion one to ten. If they wish to get wise by "experience," I would advise them to try in the above order, and report success.

As Mr. Jones has declined my proposition, he will certainly excuse me from accepting his; meanwhile, I shall hold on to disinfectants if my bees get the desease, for it is whispered that foul brood made its appearance in this county last summer.

In his reply to my review, Mr. Muth evidently wishes to overthrow the force of my argument by referring to my limited experience, as far as he has observed, which dates from the fall of 1877. It will probably avail very little when I state that I have handled bees from my very childhood, for, as Mr. Heddon says, "how can you prove the experience?" Besides, "experience is a dear school," and I prefer to get my knowledge some other way if I can, as Mr. Muth surmises. But my experience is not the question at issue.

If I have been obscure in my statements in that article, I will briefly state the several points I wished to make, once more: 1. That the solution of one part of acid in eight of alcohol is too strong. 2. That Mr. Muth on two different occasions gave solutions of different strength of a remedy of his own invention, which, if the remedy had any effect, shows inconsistency. 3. That the solution of borax and salicylic acid cannot be used with success in curing foul brood.

To prove the foregoing, I cannot assert my own experience, for Mr. Muth says I have none; so I must go to some higher authority and will include Mr. Muth himself. Mr. Muth claims to have used the solution recommended by Hilbert, thereby killing his bees. Why, if it was the same, did it not kill Hilbert's bees? Again, it has been found to kill bees, or rather brood, if used too strong; now, as Mr. Muth's bees did die, I infer he used it too strong, and he, not I, has misunderstood Hilbert's directions.

To prove the second point is, perhaps, not necessary, as he gives a little more precise directions how to use the different solutions, under different conditions, though he has not done so on former occasions; at least I am not able to find them.

To prove the third point, I referred, as authority to the dispensatory of the United States, which is certainly a higher one than the assertion of any druggist to the contrary. This is a standard work, published to guide and instruct druggists; and the article on salicylic acid is given in condensed form from Professor Kolbe's book "On the Effects of Salicylic Acid," this gentleman being the highest authority on the subject. Hence, the assertion of Mr. Muth being able to cure foul brood with a mixture of borax and salicylic acid, is contrary to the experiments and experience of Professor Kolbe, and Mr. Muth cannot deny assuming higher authority than the above named gentleman, if he persists in claiming to be correct. Of course, if that is the case, I must acknowledge to have been mistaken. If my bees get the disease next summer, I will call a convention of bee-keepers to show them how I open a hive and cure foul brood, to prove "experience."

Youngstown, O.

For the American Bee Journal.

Bee Items from Mississippi.

OSCAR F. BLEDSOE.

Having been for some time engaged in ginning my cotton crop, on my plantation in the Yazoo Valley, let me say that this Valley promises much for the intelligent apiarist. The bloom is very luxuriant and rich in honey, such as the ratan, tupelo gum, various climbing plants, maple, redbud, etc.

I have thought of establishing a large apiary down there, if I could procure desirable help. Until I have fully verified it, I will not say that any Southern locality I know of would be a good place to produce honey in large quantities for shipment. I am sure, however, that there is no risk or extra trouble here in wintering; that bees will always get enough honey to live on and prosper, and that every Mississippi farmer, by managing intelligently a few hives of bees, using extractor, etc., could procure ample surplus honey for his own use, if not some for sale. I propose to persevere in my attention to bees, believing that there is remuneration in the business here.

Last year I sold honey and bees enough to pay me back all the cash I have ever spent on bees, and 50 per cent. profit besides, so that my apiary, books, periodicals, implements, material for a large increase, in hives, etc., are all clear gain.

My bees are all doing well, only 3 nuclei having absconded during my absence. I use a shortened Langstroth frame which can be adjusted temporarily in any hive of that depth. A short Langstroth frame is the *ne plus ultra* of a frame for rearing queens, and nuclei, and for shipment; also, in this locality, is the hive for all purposes of an apiary.

Grenada, Miss.

For the American Bee Journal.

One-Piece Section Boxes.

BYRON WALKER.

My attention has been called to articles in the BEE JOURNAL of Jan. 25, in relation to the section controversy. The first of the articles in question is from the pen of E. A. Thomas, of Coleraine, Mass., the other from James Forncrook, of Watertown, Wis. Lest silence be taken for consent to the views and claims referred to in behalf of the friends of one-piece sections, I will attempt to reply:

While I heartily indorse the views of Mr. Thomas with regard to the relative merits of the 1 and 2-lb. section boxes, I cannot admit the correctness of his criticism on the one-piece section box, as compared with the dovetailed box. Mr. Thomas tells us that one-piece sections cannot be bent into shape without cracking the corners, as rapidly as the dovetailed sections can be driven together; that it required skilled labor to do this quickly; and that only those that use a large number of sections can hope to acquire the requisite skill. These are important points, and deserve careful attention. There are many things to look at, if we would reach a right conclusion in attempting to decide this matter. Very much depends upon the timber used in making the one-piece sections. If they are made of material thoroughly seasoned, Mr. T. is correct about its being a nice job to bend them rapidly without cracking the corners, especially if the sections have not been first steamed. On the other hand, if the sections are made out of timber from small, tough basswood, recently seasoned and steamed immediately before bending, they can be put together at least twice as fast as it is possible to make dovetailed sections with a mallet—the steaming of the sections being reckoned as a part of the process of putting together the one-piece sections.

There is another point in this connection that should not be overlooked in determining the rapidity with which these sections can be safely bent and the kind of labor to be employed for the purpose, and that is, the kind of grooves that are used for the corners. If these grooves are triangular, the sections can be bent very quickly, other things being equal; but if the section should break while bending, it is perhaps more trouble than the section is worth to repair the break. On the other hand, if sections having a square cut at the corners are to be bent, great care must be taken in folding, or the sections will be bent at the wrong points, and so make one or more of its dimensions too long or too short; but if correctly bent, and the section should break from any cause at a corner while bending, it can be readily mended with wire nails.

There is still another style of one-piece sections, that differs from the last mentioned, only in having the square grooves so modified that the section always bends at the right points without any coaxing; and in having the extremities of the sections joined with wire nails instead of dovetailing. I prefer this style of section to any other that I have yet seen, as it requires very little practice to put them together rapidly, and when put together, they make much the strongest section.

The second objection urged by Mr. Thomas, is, that it is not as strong as the dove-tailed, and that when filled with honey, they are liable to become broken or leaky, unless very carefully handled, while in the hands of the grocer, or before it reaches the table of the consumer; and to give point to this objection, he gives the report of a conversation, as a witness to which I suppose Mr. T. was present, in imagination at least. Now, I submit, if Mr. T. has had any such practical experience with these sections as he calls on us to imagine, would it not have been in better taste to have given us the benefit of that instead of what he has given us? At any rate, I venture to say, if he or any one else has had any such experience, it was while handling sections made of poor material or flimsily put together, or both.

I have handled a large amount of honey in a great variety of packages, including dovetailed sections. I have never had any package give such general satisfaction to all concerned, as these same one-piece sections; in fact, I have yet to hear the first complaint against them, when made as above described. On the other hand, my experience in handling dovetailed sections, is somewhat similar to the imaginary one related by Mr. T., with the imaginary element left out. I remember one lot in particular, that I purchased of parties who get their sections from the most extensive manufacturer of dovetailed sections in the United States (he has since discarded them, and now makes the one-piece section only), so that they ought to be a fair sample of such sections.

Well, in handling this lot, I had occasion to scrape the propolis off the sections before offering them for sale; and although the utmost care was used to avoid breaking sections, or starting leakage, about one out of every twenty sections was rendered unfit for market before the process was completed, owing to lack of strength in the sections.

I do not wish to be understood to claim that it is impossible to obtain dovetailed sections sufficiently strong, but I do claim that such sections are not a fair sample of those offered for sale. With regard to using glue to add strength to one-piece sections, I will say that I have never had occasion to make use of it for that purpose, but am assured by those that have tried it that it is a success, and that the time consumed in applying it, is hardly worth mentioning.

For the benefit of those who find it necessary to steam the sections before binding, and who have not the privilege of using a steam box for the purpose, I would suggest that the wax extractor placed over a kettle of boiling water, using a piece of a board nearly covering the top to confine the steam, will make an excellent substitute; or even a common tea-kettle with the top removed will do very well.

Mr. Forncrook claims, in the communication referred to, that he has been obliged to advance the price of sections, owing to basswood lumber having advanced one-third in value. Is it not a trifle strange, if Mr. F. is correct about this, that he is the only dealer in one-piece sections that seems to have found this out? Even Mr. Lewis, who resides in his own (Forncrook's) village, asks less for sections this year than he did last. The sections he advertises however, this year, are a trifle less costly than those he sold last year. But Mr. A. I. Root should reply to this article by Mr. F.; but, to my mind, we have sufficient reply in the following editorial in *Gleanings*, for February, which I quote verbatim: "Before us is a copy of a patent granted to H. W. Hutchins, of East Livermore, Maine, for a plan of making boxes of one piece of wood, precisely like the Forncrook sections, even to the V shaped groove, dovetailing in the ends, and all. The drawing makes it so plain, it is difficult to conceive that Forncrook's was not copied from it."

Capac, Mich.

For the American Bee Journal.

Do Swarms Pursue a Straight Line?

Q. C. JORDAN.

I have been keeping bees for 15 years, but never had a great many at once, neither did I ever derive much profit from them, for I never gave them the attention required to make them profitable. I have, of late, become more interested in trying to improve them than ever before. Some time ago I purchased a colony of Italians from Henry Alley. On the 17th day of April last, that colony gave a swarm, and continued to swarm every few days until they had increased to 9 good colonies. Two of them absconded, and I had heard it said that bees always went in a straight line when they swarmed until they stopped, noting particularily the direction they went. I took my compass and found they went N. 64° W.; so I put out and went over fences and ditches, woods and swamps, until I came to Broad River, a distance of 6 miles, and I saw nothing nor heard anything of them. I concluded I would go across and go up on top of the hill on the other side, and inquire if any one had seen them? As I was crossing the bridge a few steps below where I struck the river, I met Mr. Patterson. He, seeing my compass, was curious to know my business. I told him I was pursuing some fugitives, and wanted to know if he had seen anything of any parties eloping? He said he had not. I told him they must have passed close by there, as that was in the direction they were going. After I had worried him awhile, I explained the matter to him. He then told me that my bees were up at the house, already hived, and at work, and that Mr. Jackson, the man that had hived them, was gone from home. I told Mr. Patterson that I must have my imported bees, and that I would come back some day after them, which I never have done.

This satisfied me that bees do go on an air-line when swarming and leaving. Another experiment with the compass with the other swarm that left, proved the same fact. I am of the opinion that bees do not go over 6 or 8 miles generally, when they abscond. The notion entertained by some, that they have a home selected before they leave, is certainly incorrect, as the swarm above referred to settled on a bush on Mr. Jackson's spring path, and his wife found them in the act of settling.

Franklin, Ga.

For the American Bee Journal.

The New Bees, Queen-Rearing, Etc.

D. A. PIKE.

Having had experience with the Syrian bees, I must say that my impressions are not favorable to them. They did not gather enough honey to last them till cold weather came. I gave them honey from my other bees twice, before putting them into winter quarters. I have only discovered one good trait about them: the queens are prolific. But what does that amount to, if the bees do not gather enough honey to live on? I never saw a Syrian bee come in with a heavy load of honey. If fertile workers are wanted, get the Syrian bees.

If mine live till next spring, I will keep them till the first of July, and if they do not prove better honey gatherers in the future than they have in the past, off goes their heads.

I shall not sell any more Syrian queens till I have tested them more myself. Mr. S. Valentine's experience in the last Bee Journal is about the same as mine. We Marylanders claim to have better bees than the Syrians.

Much has been said about rearing good queens. Some claim that they should be reared from 3 or 4 colonies. I hold that a queen-breeder should have his queens bred up to such a standard of excellency, that he need not be afraid to rear queens or drones from any colony in his apiary. Then he is prepared to send out good queens to his customers, and not till then! What would be thought of a queen-breeder who says that he intends to rear all his queens this season from one queen, and all his drones from one or two other queens, and then say that he had fifty or one hundred orders in for early tested queens, as is always the case with queen-breeders. Do you think his customers would get queens fit to rear queens and drones from? hardly; or he would not need to be so particular about rearing all his queens and drones from a few colonies.

Smithsburg, Md.

For the American Bee Journal.

Another Partial Review.

T. F. BINGHAM.

It seems to me that the resolutions passed at the Northeastern New York Convention are aimed at a man of straw. When they specify smokers in the resolution they design to censure.

I am sure there was no allusion in my poor short essay to smokers. It did not contain the word, neither did it refer disrespectfully to the late lamented M. Quinby. Is it disrespectful to say "The early writings of the lamented M. Quinby, called 'The Mysteries of Bee-Keeping,' which were among the most conspicuous of the closing era?"

Will the gentlemen please notice the quiet sarcasm implied in the titles: "Quinby's New Bee-Keeping," and "New Quinby Smoker." Would any one suppose the book or the smoker to be *original*, from the titles? Either the new gets a compliment or the old gets a slur.

I trust there will never be so little of my smoker left that it will have to be advertised as the "New Bingham Smoker."

I am sorry to mention matters which should be in an advertisement, but the Convention report, already published, has made it necessary. President Clark evinced a wonderful faculty for overlooking the facts when he said that he "would not use a Bingham smoker under any consideration; that because Quinby did not get a patent and Bingham did, we are obliged to pay for it." The facts are that Bingham sells for 65 cents, postage paid, a $\frac{1}{3}$ larger and much better smoker than Mr. Quinby did for $1.50, which was his (Quinby's) regular price for the old and *now obsolete* Quinby smoker.

When Mr. A J. King first began to make my smokers, he advertised them as the "New Bee-Smokers;" afterward he offered to pay me a cash royalty for a license to make them. At the Chicago National Convention he told me he gave me the credit of the invention, but thought he had a right to make them as he was then making.

Abronia, Mich., Feb. 8, 1882.

☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. Demaree, *Sec.*

Christiansburg, Ky.

SELECTIONS FROM OUR LETTER BOX

Sweet Clover.—The thermometer stands 66° above to-day; bees flying lively and carrying in pollen for the first this year, the earliest I ever knew. My 31 colonies, all in good condition, had flights about every week this winter. The lowest fall this winter was 18° below, ranging from 35° to 55° above, but weather was very wet. My bees are mostly blacks and hybrids, packed in wheat straw on summer stands. We have no sweet clover in this country. I sowed some last fall in my garden, but if it has ever come up I cannot see it. What does the plant look like. It seems from the reading of the Bee Journal, that it grows spontaneous around Chicago. We do not have much here for bees, only white clover, and that lasts until about the 10th of July, and after that our honey season is over for surplus. I like the Bee Journal, but would like it better if it was a daily or tri-weekly.

L. T. Mobberly.

Long Grove, Ky., Feb. 19, 1882.

[Your sweet clover planted last season will undoubtedly come out all right. Its germination is of very slow development, hence it is better to sow it in the fall, or very early in spring, while it will yet get several sharp, severe frosts, to assist in bursting the hulls.

Sweet clover was sown in the western part of this city some 12 or 15 years ago, and now prevails to quite a liberal extent in the suburbs, and along the railways and roadways running into the city. Many farmers and bee-keepers have assisted to spread and perpetuate it, for their bees and grazing animals. It is found very good to plant along newly made roads, as the deep and matting roots have a tendency to retard wash-outs and gullies. The young plant has much the appearance of white clover, excepting that they grow more erect from the seeds.—Ed.]

Successful Wintering.—I packed twenty-four colonies of bees last fall, in the improved Quinby hive, on the summer stands. All are now doing well, I never have lost a colony yet. I pack in chaff, in Quinby hives, just as described by Mr. Poppleton, at the Michigan State Bee-Keepers' Convention, at Battle Creek. I do not think any bee-keeper ought to "kick" on Mr. Jones for selling queens this side of the line. My bees came into the shop yesterday after honey in some combs I had sitting out. Success to the Weekly; I should be lost without it.

S. S. Bristol.

Galesburg, Mich., Feb. 21, 1882.

Bee-Keeping for Profit.—In order to make bee-keeping pay every year in succession, we need experience, because experience will teach us, as nothing else will, that it pays in the long run to let bees have all the honey in the hive they can possibly use, at all times, for with us what is a harvest one year may fail the next, and what fails the first year will give plentiful bloom the next, and if not a plentiful bloom, if bees are very strong, or rather have an abundance of honey in the hive, they seem much more inclined to gather it. In 1881, the year just passed, our bees paid well, although the early part of the season Mr. Axtell and myself were both very sick for some weeks, and our bees suffered for care; but as they had a great abundance of honey at all times of the year, they did not feel the neglect that they would have done if on scanty fare. We do not believe it pays to give bees very close attention if we have to hire inexperienced help to do it, unless we can be with them; or if they do have experience, if they are careless or neglectful they will injure the bees more than they will do them good. If bees have an abundance of honey in the brood nest abundance of bees and a large hive, they need but little care from spring until fall, except to see to them in swarming time, that they do not fill up too closely with honey, and to care for the swarm, if one issues. We think it pays, also, to have young queens, or cells just ready to hatch, to insert into the parent hive; but the idea some throw out, that each colony must be opened and examined every 10 days or 2 weeks, we think erroneous. If one has but a few colonies and will be very careful not to injure them, then no harm is done if opened every day, but it will not pay; better have more bees and less care. The above suggestions are where we run bees for honey, which we think pays ever so much better than queen rearing or selling bees. At least such has been our experience. In fact, we would not sell bees at all, if it was not we could not keep so many in two locations—one for Mr. Axtell to look after, and one for myself. We think from 75 to 125, or perhaps a less number, are all that should be kept in one location, unless it is an extra locality for bee forage. We believe it pays to rear our own queens, too; except to buy one occasionally to introduce fresh blood. Perhaps our hive has something to do with our success in getting honey, rather than bees and queens, at the present cheap price for queens and bees, while honey brings a good price and ready sale, makes honey gathering the most profitable. We use the Improved Quinby hive with our own improvement on it, which affords an abundance of room above as well as below, and without the tiering up process, having always plenty of room in the hive. When surplus frames for honey are removed, then ample room is given for chaff packing, which keeps the bees dry and warm whether in the cellar or out. Last winter, 1880-81, we lost but 1 colony out of over 100 wintered in the cellar. Some have felt a little disposed to laugh at us for packing with chaff for cellar wintering, but we think it pays every time. We think it pays to keep them in the cellar until about the time they can get natural pollen; then, when set out, next day or so crowd, them down on to about ½ their number of frames, add more as warm weather and brood increases. This cures dysentery and prevents spring dwindling.

MRS. L. C. AXTELL.
Roseville, Ill.

A Bee Cellar.—Tiling is now laid in my cellar and grading going on around the sides of my dwelling. The tiling is about 6 inches bore, most of it; 50 feet next the house is a little short of 6 inches, and 4 inches fall to the rod. I also have a 6-inch stove-pipe connected with the chimney. The top of the chimney is 28 feet higher. Will this give sufficient ventilation? The cellar extends under about two-fifths of the ground floor. The whole ground floor is 22½x16 feet. The smaller tiling comes about 30 feet from the house. There is a door between the two cellars or parts. It is about 7 feet from the sleepers to the ground floor above. Will not this arrangement give sufficient ventilation to keep the bees in a healthy condition, winter and summer, if put in? We put our bees in Jan. 5. They appear to be doing reasonably well. Some colonies were quite light, and we have been so busy they have not been cared for since. The mercury has stood in the cellar most of the time at 44°. The winter here has been very pleasant, so much so we have been hauling dirt and grading around the house. Heretofore the floor in the east part of the cellar has been laid right on the ground, and the atmosphere was quite musty; but now I think we have obviated this, if not, I will cement the whole floor soon as I get time. I had ⅛ acre of sweet clover last year, which was cultivated the first year. It gave a tremendous bloom. It was drilled in long rows 4 feet apart, and the ground was wholly covered with bloom, clear above one's head, some growing over 8 feet high, and the bees were busy on it for weeks. I wish to put in 6 or 8 acres of it this and next month. Will it do enough better to drill and cultivate it, to justify the care, over broadcast sowing? I would like, also, to drill in 3 or 4 acres of mammoth mignonette seed. MOSES BAILEY.
Winterset, Iowa.

[Your drain tile, as described, ought to give sufficient ventilation to meet the requirements of the bees, especially with the stove-pipe connection with the chimney, to act as a draft to bring the air through the tiling. Undoubtedly, a partial cultivation of the sweet clover will pay, as you have already demonstrated with your eighth of an acre. Should you conclude to put in the mammoth mignonette, why not drill it in with the sweet clover, nasmuch as the latter does not bloom the first season, and thereby make the one cultivation answer for both? The mignonette will bloom the first season, and also form a good protection for the sweet clover, and save extra ground room for one year, at least.—ED.]

Poultry in the Apiary.—I am not regularly in the bee business, but read the JOURNAL with much interest and no little profit, and venture, therefore, to ask for information in your columns on these two points: 1. Which is best for bees, for the hives to sit on the ground or in frames, or on benches? 2. May poultry be allowed to run among the bees without injury to either? W. P. HANCOCK.
Salado, Texas.

[1. Each method has its advantages. We prefer for the hives to sit on frames, as they give an opportunity for a free circulation of air underneath the hives in summer, are cheaper of construction than platforms, and are not so liable to rot the lumber in the bottom-boards.

2. We have watched for hours, in vain, to discover chickens destroying bees while running in the bee-yard; but they do work great destruction to moths, spider, ants, and other insects. So far as we know now, we certainly favor the plan of giving poultry, especially chickens, free range of the apiary. We know nothing about ducks, and will not express an opinion regarding them.—ED.]

Bees Breeding and Gathering Pollen.—My bees have wintered well so far, and were bringing in pollen on the 14th of this month. The colonies are all strong and in good condition. I have 12 colonies in all, 3 Italians, and 9 hybrid, in 11-frame Langstroth hives. It snowed here all last night, and is still snowing. Will this cold snap be a back set on the brood?

EDMUND DE LAIR.
Oketo, Kans., Feb. 20, 1882.

[No; if your colonies are very strong, as the cold will probably be of very short duration. Of course, brood-rearing will not progress so favorably as if the weather was milder, and with moderate nights; but you will undoubtedly get enough young bees to off-set spring dwindling, especially as natural pollen has been coming in, and will continue to do so.—ED.]

Hill's Winter Bee-Hive.—Is there a patent on Hill's winter bee-hive, having a cap to slip over the lower part for winter protection?
Salem, Ohio. A SUBSCRIBER.

[There is, and the cap, we believe is embraced in the patent.—ED.]

To Cleanse Wax.—Why do not some of the great bee-keepers tell us how they get so much honey, and what kind of hives they use, one-story or two, and whether they extract from the brood chamber or the upper story only, and how much the honey weighs to the gallon? Then we would know where these great yields of honey come from. A gets 25 lbs. and B gets 75 lbs. to the colony, side by side. This is my method: In the spring I get brood in all the combs by transferring the outside combs to the center one at a time; then I put on a half-story to give the bees room. I try to keep the hive and boxes full of bees. If they swarm before June 20th, I put them in a new hive, and after a little return them to the old hive. I use the American frame, 9 in a hive. My bees have averaged me 90 lbs. per colony, spring count, for 5 years; increase, double. I have 44 colonies in the cellar at a temperature of 46°, and they are quiet. Following is a good method to cleanse wax: Tie some wheat flour in a sack or cloth, then immerse it in water and squeeze it out until the water is about the color of skim-milk; put in your wax and melt it; the flour will take all of the dirt to the bottom. Twice melting this way, will cleanse the blackest wax you ever saw. Please answer: 1. Is it best to give bees a flight between November and April? 2. Which hive will give the best returns—a long one, or a two-story hive? FAYETTE LEE.

Cokato, Minn.

[1. Yes, by all means, if the weather is suitable.

2. A two-story hive; as the honey can be taken from it to much better advantage, and with less disturbance of the bees. The "long idea" hive was much in vogue at one time, but has been generally abandoned, even by those who were most sanguine of its success.—ED.]

Marking Location Anew.—I have read the BEE JOURNAL with much pleasure for 3 years, and, although a bee-keeper for over 30 years, I have known but little about them except what I have learned from the JOURNAL, and through use of the moveable-frame hive. But I have much to learn yet. In the JOURNAL of Nov. 16, page 363, I read Rev. Mr. Briggs' description of an out-door packing box, and I built two such, each 16 feet long, and filled them with hives of bees, and packed them as he directed. I was so well pleased with them that I built two more, but before putting the bees in, a neighbor told me that if the bees fly out they will return to their old stand, and will be lost. If this is true, I will pack no more. They have not had a flight since I packed them. Please let me know if this is so. Last summer I had my hives standing 5x3 feet apart, but not straight in line. Next summer I would like to place them in a straight line, but not so close, as I have plenty of room. What distance apart should I place them to be handy to manipulate? I have 30 colonies, nearly all in good order. Last winter I lost 8 out of 15, and bought 4 in the spring in log-gums, which I transferred into frame hives, and increased to 30. How shall I manage those I have packed in the 16-foot boxes, in the spring, as I cannot put them back on the old stands? SAMUEL UTZ.

Kenton, O.

[You will have no trouble about those packed away in the 16-foot boxes. If there are no hives on the old stands, the bees will find their way to their own hives; but a safer way will be to stand up, or slant, a board in front of each hive, to partially obstruct their free egress and ingress. Put up these boards as soon as you set them out in the spring, before they have had an opportunity to fly. By this means, they will mark their location anew. We often adopt this plan in summer, when changing location of hives, and never have experienced any trouble, nor lost any bees. If we had plenty of space, we would prefer our hives to stand 5x8 feet apart—that is, rows 8 feet apart, and hives 5 feet apart in the rows.—ED.]

Bees in West Tennessee.—This is a medium section of our country, as I judge from reading the items in the BEE JOURNAL from other States. We have here maples, willows, red-buds, wild plums, hazels, black and sweet gums, and most all kinds except linden or basswood, which is so highly prized in the Northern States, though we have the poplar (tulip tree), which is hard to beat, for quality as well as quantity. White clover covers the ground in many places. All clovers do well here that I have seen. Alsike does well, also the Japanese clover, which has very delicate looking stalks, of finer texture than the white clover, and which the leaves resemble a little; but it has a yellowish bloom. It grows spontaneously in the woods and fields where not cultivated. Last season it stood the drouth better than any of the grasses, and cattle are fond of it. I do not know whether it is a good bee plant. I have kept bees 8 or 10 years in a small way; had 14 colonies last spring of Italians, hybrids and German bees, in Langstroth hives, which I increased to 27 by dividing, all in good condition now. Our bees are not troubled with dysentery here, and we need no winter houses or chaff hives. Bees winter well on the summer stands if the cracks are stopped up. I obtained 600 lbs. of extracted and 80 lbs. of comb honey, which I sold at 10 cents per lb. Some sell at 8 cents per pound for 30 to 40 pound boxes. We will have to use the extractor to drive them out with their old boxes. 1. Would it be advisable to use some of the small sections for comb honey? 2. Are the recipes given in "Honey as Food and Medicine" all reliable? I wish to write off some of them for our county paper, to improve the bee business and interest the Patrons. 3. Do those extractors that use 3 frames at one time, require the frames to be lifted out each time when you want to reverse them, or is there room inside of the extractor to turn them? 4. Which do you consider the best extractor for 3 frames? 5. How much better is a good honey knife than a good table knife? 6. What would bees be worth, after May, without queen, per pound? I have no use for my workers after that time. 7. Could they be utilized? R. H. C. MITCHELL.

Humboldt, Tenn.

[1. Yes; your locality is no exception to the rule, that the more attractive merchandise finds the quickest sale at the best prices.

2. We believe they are. They were culled with great care, and from the best authorities.

3. The frames require to be lifted to turn them.

4. The Excelsior Extractor is the only one we are aware of that takes 3 frames.

5. A good honey knife is as much better than a good table knife, as a good steel-pointed plow is better than the old-time forked stick, or the steel-bladed axe is better than the stone one.

6. Bees would not be worth much per pound after having spent a season of labor in your honey harvest, as they would all be old ones. You might, however, find buyers for them.

7. They could be utilized for but few days; probably not long enough to remunerate for express charges in transportation. We never took kindly to the traffic in bees by the pound, and many who were quite enthusiastic over the plan have abandoned it in disgust.—ED.]

Dysentery and Wintering.—The question of wintering seems to be the only one left of great importance. The following conclusions I have arrived at after 15 years' of experience: Either very great cold, which causes a consumption of honey and pollen; or poor fall honey, when stores are scarce; or warm weather, which produces flight or uneasiness, and a consumption of stores; or brood-rearing, which causes the manipulation of pollen, are hints as to the cause of dysentery, the ravages of which are greatest toward spring, when long, cold confinement, or changable weather and partial confinement furnish the conditions, as pollen is not got rid of by perspiration, and dysentery is the result. It may be urged that bees do not always die with these conditions—I answer, neither do men nor animals always die under conditions favorable to disease. Mortality is the exception, not the rule, and the same with disease. A prevention by artificial means is the remedy, for which witness the success of bees in cellars and chaff hives, under proper management, a few main points of which are: abundance of fresh air of a uniform temperature; having the hives well ventilated by leaving them open at the top and bottom, or, if protected at the top, they must be covered warm, or moisture will collect and disease them; a poor quality of stores, with little or no pollen, for when they are set out in the spring it should be only when they can be supplied with pollen, either naturally or artificially, as they will not usually breed in a bee-cellar. As to ventilation in chaff hives, it must be at the bottom and at the top through chaff coverings; but as to wintering without any top covering, and especially in thin hives, I should expect to take the usual chances, which will depend on the above-named conditions, which, in my opinion, and as proven by experience, it is impossible to prevent, looking at the nature of the bee. I have had a number of colonies freeze, with quarts of bees and plenty of honey right under them, and no disease.

Milan, O. G. H. MACKEY.

Dead Brood.—I send you by mail, to-day, a sample of some combs in our apiary, which we fear are infected with foul brood. If you can settle that question you will confer a great favor. We bought bees last year from different parties, in box hives, and transferred them, and now we find something like I send you in most of the hives of one lot, and none of it in any others. S. N. WYCKOFF.

Salinas, Cal.

[We find, on close inspection, no dead brood except in cells sealed over; none of these are perforated. On removing the cappings, we find only a thin, black, dried-up skin, which is easily removed with the point of a pin. If there was unsealed dead brood at the time of taking from the hive, it has dried to an impalpable powder. The dead larvæ from these cells has undoubtedly been removed by the bees. We do not think it is foul brood, but it may prove to be a disease quite obnoxious, and would advise close observation as to its cause, extent and effect.—ED.]

Winter Feeding.—I purchased several colonies last fall in Langstroth and Thomas hives; it was too late to feed and prepare the weak colonies for winter, so I placed them in a clamp. I find, on examining, the weak ones are still alive. We have still two months before bees will fly, and I am afraid the weak ones have not sufficient stores to keep them alive till spring—1. Would it do to take them out of the clamp and into a warm room, cover the entrance with wire-cloth, and feed them? 2. Would they commence breeding, or should they have a fly after being disturbed? 3. Should a fine day occur before placing them out for spring, and they are taken out for a fly, would they return to the hives, if placed in the yard? Am much pleased with the BEE JOURNAL, and wish you every prosperity in the change; I think it invaluable for the bee-keeper.

J. M. KNOWLES.

Lynden, Ont.

[1. You might put them in a room just above the freezing temperature, and feed them. Do not cover the entrances, for if two or three should make an unsuccessful attempt to get out, they would alarm all the balance, then a flight would be necessary.

2. They will not commence breeding, but might contract dysentery. The better way would be to feed them hard candy, placed on top the frames, which can be done almost any moderately mild day, without disturbing them. For the candy, use good sugar, putting about 1 pint of water to 3 pounds of sugar; boil till it will harden when cooled, then make in flat sheets; after it has hardened, place it on top the frames with as little disturbance as possible.

3. Should you have a day warm enough for the bees to fly with safety, you had better set them all out, slightly obstruct the entrances with a slanting board, and overhaul and feed all that require it. You can then give them honey or candy, as is most convenient. The flying bees will all return to their respective hives, except the weak or debilitated ones, which would most likely die in the hives before spring.—ED.]

Lots of Pollen, but No Brood.—Bees flew splendidly yesterday, which makes the third flight they have had since October. They all seemed to be in fine order. Those I examined had lots of pollen, but no brood—not even an egg. My experience goes to prove that pollen is only used as food for larval bees, and not as a diet for mature bees, as very many writers would have us believe.

G. M. DOOLITTLE.

Borodino, N. Y., Feb. 16, 1882.

Wintering Bees.—My bees are wintering finely. There are no dead bees about the hives nor in them; they are clean and lively. My bees are in Langstroth hives, covered with honey-board. I learn from the BEE JOURNAL that cloth is better; if so, what kind shall I use. The boards are ¼ inch above the tops of frames. Should the cloth lay closely on the frames.

PROF. S. J. ROBBINS.

Penfield, N. Y.

[Cloth is better. We use woolen, but many use cotton; others ducking, while most anything will answer. If you have passage holes through the combs, then the cloths or blankets can lie on the frames; if there are no passage-ways through, then place half-inch square sticks crosswise of the frames, to give the bees a passage over.—ED.]

The Patent on One-Piece Sections.—I have 65 colonies of bees in good shape, on their summer stands, and they seem to be doing well. The past season was a very poor one with me for honey. I obtained but little surplus but a large increase. 1. What does Mr. Forncrook's patent cover on the "all-in-one-piece section box." I see that Mr. Lewis advertises a one-piece section, on which he says there is no patent—is it an infringement? 2. How is Lewis' section used, with no opening in the bottom for the passage of bees. The BEE JOURNAL, in its present form, is about as near perfect as it can be.

A. D. STOCKING.

Ligonier, Ind.

[1. Mr. Forncrook claims his patent covers all one-piece sections; also the machine for their manufacture. We cannot answer whether Mr. Lewis' one-piece section is an infringement.

2. You will find this question answered on page 123 of last week's BEE JOURNAL.—ED.]

Superseding Queens.—Our bees are healthy and have an abundence of stores. The winter has been preeminently an open one. To use a common expression in use about here, "it has rained all winter," and is still pouring down. Our bees have been able to fly every few days. Everything being drenched with water, I fear that there will be considerable dwindling. But bountiful stores, and a favorable spring, will soon supply the loss. Do you not put it too broadly in your answer to R. P. Williams, page 108, No. 3? If the queens are young, and the weakness of the colony not their fault (facts for the apiarist to decide), why not give them a comb of brood and save them for future use? G. W. DEMAREE.

Christiansburg, Ky.

[Perhaps the easiest way to answer the question is by asking another: If you were buying good queens (and we know you do not buy any but those you think are the best), would you feel that you were fairly dealt with, if you was sent a lot which had been taken from colonies that had been doubled up on account of weakness? Of course, there might be exceptional cases, but, as a rule, where a number of colonies in the apiary are too weak in population to attain satisfactory results, while other colonies are quite the reverse, the difference most likely is attributable to the queens. If queens are not worth buying as first class, they are not worth keeping.—ED.]

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The Apiary Register devotes 2 pages to each colony, ruled and printed, and is so arranged that a single glance will give a complete history of the colony.

For 50 colonies (120 pages)......$1 00
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The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., Feb. 27, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The market has an upward tendency, and I am now paying the following prices in cash: Light comb honey, in single comb sections, 17@21 cents; in larger boxes 2c. less. Extracted, 8@10c.

BEESWAX—Prime quality, 18@22c.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

HONEY—The retail demand for extracted, in small packages, is fair, but only an occasional barrel is sold for manufacturing purposes. It brings 7@11c. on arrival. Demand for comb honey is only in a retail way, and only choice white is salable. It would bring 20c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb, in 1 to 1½ lb. sections, 20@22c.; same in 2 to 3 lb. boxes, 17@20c.; dark and mixed, in 1 to 3 lb. boxes, 12½@15c. Extracted, white, 10@11c.; dark, 9c.

R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—There is a liberal supply of honey here for which trade is very little demand, and prices rule weak and irregular.

We quote as follows: White comb, in small boxes, 18@19c; dark, in small boxes, 12@14c. Extracted, white, 10@11c.; dark, 7@9c.

BEESWAX.—Prime quality, 21@23c.

THORN & CO., 11 and 13 Devoe avenue.

ST. LOUIS.

HONEY—Quiet and unchanged. Comb at 18@23c; strained and extracted 9@11c. to 12½c.—top rates for choice bright in prime packages.

BEESWAX—Stiff at 20@21c. for prime.

R. C. GREER & CO., 117 N. Main Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—The market remains unchanged; 1 and 2 lb. sections, of best white, sell readily at 21@22c.; glassed white, 16@17c.; buckwheat very dull at 15@16c. for unglassed. Extracted, small packages, 12c.; large packages, 11c. per lb.

BEESWAX—Scarce at 25@30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—There is an entire absence of inquiry. Under selling pressure, quotations could not be realized. It is impossible to tell what offerings forced upon the market would bring.

We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8¾@10c.; dark and candied, 7@8c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

☞ We will send Cook's Manual bound in cloth, postpaid, and the Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75.

◆

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

☞ We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal.

◆

☞ It is a fact that horse dealers are buying horses with ringbones and spavins, because they can make money by using Kendall's Spavin Cure. 9w5t

M. H. BIRD & J. LEE,
Milletts, Eaton Co., Mich.,
Have for sale
Pure Italian Bees,
at reasonable prices, COLONIES, QUEENS, NUCLEI. We solicit correspondence, and guarantee satisfaction in every sale. **BIRD & LEE.**
9m3t

BEES, QUEENS & SUPPLIES.

Colony Italian Bees, in 10 (L.) frame hives, $6.00; 3 (L.) frame Nucleus, $2.00; 2 frame, $1.50—add price of Queens; Hybrid Queens, $1.00; Italian (Untested) Queens, laying (and where Cyprian and Holy Land Bees are kept) $1.00. All cells reared in full colonies. Bees, $1.00 per pound. Discount on larger orders. Guarantee safe delivery to your post or express office. Root's Extractors, Root's A B C Book and Cook's Manual, in cloth, each $1.25. Address,
OTTO KLEINOW,
9mtf Opposite Fort Wayne, Detroit, Mich.

WANTED—Five or more colonies of Bees in box hives. State kind, number, and lowest price. THOS. S. CHAPMAN, box 134, Lemont, Ill.
9w2tp

Chaff and Langstroth Hives.
APIARIAN SUPPLIES
kept on hand and made to order. Send for price list. Be sure and state whether or not you now have my 1881 circular.
4m3t **S. D. BUELL,** Union City, Mich.

MISSISSIPPI APIARY.—I will ship Nuclei and Queens, and guarantee safe arrival, and warrant all shipments to come up to my statements or refund the money. For terms apply to
OSCAR F. BLEDSOE, Grenada, Miss.
9m2t

130 COLONIES OF ITALIAN BEES for sale at $5.00 per colony, in lots to suit; all in good condition, and in Langstroth hives containing 10 frames.
9w3tp **PAUL DUNKEN,** Freeman, Mo.

ITALIAN BEES.—Having wintered without the loss of a colony, I will sell a few select colonies in the spring, and Queens during the season. Address, **R. M. ARGO,**
9m3t Paint Lick, Garrard County, Ky.

ANOTHER NEW IDEA.

Foundation all ready for business. Every sheet wired and bound around with a light wooden rim, ready to adjust instantly in your frame. No advance in price. Small sample for 6 cents. I shall also breed choice Italian and Holy Land Queens, practicing a new stimulative process. Write now for prices and particulars. Address,
9smly **JOHN H. MARTIN,** Hartford, N. Y.

Albino and Italian Queens,
BEES, AND
Supplies for 1882.

HEADQUARTERS for the ALBINO BEE.

If you have any taste for beauty, desire pleasure in working, and want large yields of honey, buy the Albino, for they are the "Coming Bee." In order to meet the demand for Queens, I have increased my stock, and will be able to furnish several hundred per month after the 1st of May. Also, furnish Hives, Novice Extractors, and Apiary Supplies generally. Send for Price List. Address,
S. VALENTINE,
9m3t **Double Pipe Creek, Carroll Co., Md.**

BE SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian, Cyprian and Holy Land Queens and Bees.

J. C. & H. P. SAYLES,
Hartford, Wis.
4sm15t

1882-Southern Headquarters.-1882

For Early Italian and Cyprian Queens;

Imported and Home-bred; Nuclei and Full Colonies. For quality and purity, my stock of bees cannot be excelled. I make a specialty of manufacturing the Dunham Foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Catalogue, giving directions for introducing queens, and remarks on the New Races of Bees. Address,

DR. J. P. H. BROWN,
Augusta, Ga.
5smtf

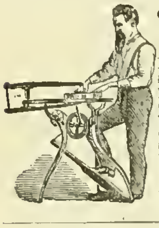
BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying 22c. per pound, delivered here, Cash on arrival. Shipments solicted.

ALFRED H. NEWMAN,
972 West Madison Street, CHICAGO, ILL.

BARNES' PATENT

Foot Power Machinery



CIRCULAR AND SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., I

ONE-PIECE SECTIONS a specialty. Pound size, $4.50 per 1,000. L. Hives 50c. Circular free, BYRON WALKER & CO., Capac, Mich.
8sm12t p

DODGE'S FEEDER

STILL AHEAD!

Sample by Mail.............................. 30c.
Per dozen, by express......................$2 00

Catalogue and Price List of Bee-Keepers' Supplies and Small Fruit Plants, free to any address.

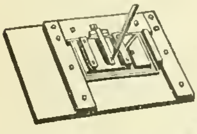
8w4t **U. E. DODGE,** Fredonia, N. Y.

1882.-ITALIAN QUEENS.-1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby Smoker for $1.50. Address all orders to

L. J. DIEHL,
(Money Order Office)—Butler, Dekalb Co., Ind.
8w6m

D. A. PIKE, Box 19, Smithsburg, Wash. Co., Md., breeder of those **Beautiful Albino and Italian Queens and Bees.** which gave universal satisfaction last season. Send for circular,
8smGt



GOODRICH'S FOUNDATION FASTENER.

A SIMPLE MACHINE

For FASTENING COMB FOUNDATION to the TOP AND ENDS OF BROOD FRAMES, OR IN SECTION BOXES, securely and rapidly. Send for circular.

S. GOODRICH,
Urbana, Ill.
8wtf

GREGORY'S
SEED
CATALOGUE.

Thirty-six Varieties of Cabbage; 26 of Corn, 28 of Cucumber, 41 of Melon, 33 of Peas, 28 of Beans, 17 of Squash, 23 of Beet and 40 of Tomato, with other varieties in proportion; a large portion of which were grown on my five seed farms, will be found in my **Vegetable and Flower Seed Catalogue for 1882,** sent FREE to all who apply. Customers of last season need not write for it. All seed sold from my establishment warranted to be both fresh and true to name, so far, that should it prove otherwise, I will refill the order gratis. The **original introducer of Early Ohio** and **Burbank Potatoes, Marblehead Early Corn,** the **Hubbard Squash, Marblehead Cabbage, Phinney's Melon,** and a score of other new Vegetables. I invite the patronage of the public. New Vegetables a specialty.

James J. H. Gregory, Marblehead, Mass.
49m5t

See! See! See!

The Bee-Keepers' Exchange.

This journal begins its fourth year in a new dress, has been increased in size to 32 pages, is a live, progressive monthly, edited by practical bee-keepers, and is richly worth the subscription price, which is $1.00 per annum, postpaid, or three months on trial for 25 cents. Sample copy free. Our price list of Apiarian Supplies is now ready, and you will consult your best interests by securing a copy before you order. Address,

HOUCK & PEET,
Canajoharie, N, Y.
1mtf

READ THIS.

FIFTY YEARS AN APIARIST.

We are the oldest breeders of Italian bees and manufacturers of apiarian supplies in New England. Our experience dates back to the first experiments of Mr. Langstroth in the movable comb system. Send for our price list of bees, queens and supplies, before making your purchases for 1882. Address, **WM. W. CARY & SON,**
Coleraine, Franklin Co., Mass.
1mtf

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to A. I. ROOT, Medina, O.

1882.--QUEENS--1882.

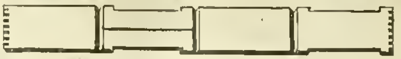
I am now booking orders.

Warranted Italian Queens $1.00, six for $5.00; Tested do., after June, $1.50. Cyprians, Unwarranted, $1.00, six for $5.00. Send for circular giving description and recommendation from Postmaster and county officers. Money order office, Versailles, Ky.

J. T. WILSON,
Mortonsville, Woodford Co., Ky.
1mtf

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. *Sells at Sight*, Double your money Address Dr. Chase's Printing House, Ann Arbor, Mich
36m1yp

HIVES AND SECTIONS.



We are in better shape than ever to furnish Bee Hives and Sections, having remodeled our machinery, and put everything in tip-top order for the coming season. We make a specialty of our

"BOSS" ONE-PIECE SECTION.

We have not sold any rights to manufacture, therefore we are the sole manufacturers in the United States. Send for Price List.

JAS. FORNCROOK & CO.
Watertown, Wis., Dec., 1881.

NOTICE—Some persons having infringed upon our Patent "One-Piece Section," we hereby give notice, that we shall prosecute all manufacturers. We shall not molest bee-keepers for USING those purchased before Dec. 1st, 1881, but hereby caution them against buying any except those bearing our stamp. It has been reported by some that it is our intention only to prosecute bee-keepers for using those One-Piece Sections heretofore purchased; this is wholly untrue and false.

JAS. FORNCROOK & CO.
Watertown, Wis., Dec. 15, 1881. 51mtf

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All about Resources, Climate, etc.

What can be done here, what it costs to come, routes, when and where to go.
The great Agricultural and Horticultural Paper of the Pacific coast,

Semi-Tropic California,

AN ILLUSTRATED MONTHLY.

Subscription price east of the Rocky Mountains, $1.00. Sample copy to any address FREE for three three-cent stamps.

Address,
CHAS. COLEMAN, JR.,
LOS ANGELES, CAL.
☞ Mention this paper. 49m4tx

HEADQUARTERS IN THE SOUTH

For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty.
Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
5mtf **PAUL L. VIALLON,** Bayou Goula, La.

C. Olm's Comb Foundation Machine.

☞ Send for Sample and Circular.
18mtf **C. OLM,** Fond du Lac, Wis.

G. M. DOOLITTLE SAYS:

Stanley's Vandervort Foundation

for sections is **"even thinner than natural comb, and is the very best foundation made."** See BEE JOURNAL of Jan. 3, and *Gleanings* for Jan., pages 14, 15. We also make high-walled Vandervort foundation for brood chamber to fit any size frame. Send for samples and prices, or send $10 for 20 lbs. 10 sq. ft. per lb.,

3sm4t G. W. STANLEY & BRO., Wyoming, N. Y.

1882. JOSEPH D. ENAS, 1882.

(Sunny Side Apiary,)

Pure Italian Queens, Bees, Colonies,

Nuclei, Comb Foundation, etc.,

Address, **Napa, Napa County, Cal.**
9m8t

Seeds

We have advantages as **seedsmen** of which we wish to tell the public. Thirty years experience as **PRACTICAL MARKET GARDENERS AND FLORISTS,** gives us such knowledge as to enable us to judge not only what are the best kinds for **Fruit. Flower or Vegetable** crops (whether for Private or Commercial Gardening), but also to thoroughly test the quality of all **Seeds** and **Plants.** Our **Greenhouses** and **Frames** in Jersey City, are the **largest in America,** covering upwards of four acres, solid in glass, employing an average of seventy men throughout the year.

PETER HENDERSON & CO.

35 Cortlandt Street, New York.

☞ We send our Illustrated Catalogue of **"Everything for the Garden,"** on application.

FREE Plants

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,

1w1y Hamilton, Hancock Co. Ill.

GOLDEN ITALIAN QUEENS.

-frame Nucleus, with Tested Queen........$4.50
2-frame Nucleus, with Tested Queen........ 5.00
Full Colony, with Tested Queen, before July 1......12.00
Same, after July 1..........10.00
Tested Queen, before July 1, 3.00
" " after July 1.. 2.50
" " per half doz., after July 1..............13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,

1wtf Burlington, Iowa.

BEES for SALE.

I have for sale about **300 Colonies** of the

Celebrated Arkansas Brown Bees,

which I will dispose of in lots of TEN COLONIES OR MORE at very reasonable prices. They are in ten-frame Langstroth and box hives. These bees are said to be large, remarkably amiable, good section workers, and excellent comb builders. Owing to the mildness of the Arkansas winter, they will be very strong in bees, and spring dwindling will be avoided. These bees can be delivered on board steamer, near Memphis, before the middle of March, and before the early honey flow and swarming commences. Write soon for bargains, as I will close out both my Southern Apiaries by March 15th, or remove them North.

I am also booking orders for Italian Queens, Nuclei and Colonies, to be supplied from Chicago in June. Address,

ALFRED H. NEWMAN,

972 West Madison St., **CHICAGO, ILL.**

Bees and Queens

FULL COLONIES of ITALIAN BEES,

From my Apiaries.

QUEENS and NUCLEI IN SEASON.

☞Satisfaction guaranteed. Circular on application. **J. H. ROBERTSON,**

50wtf Pewamo, Ionia Co., Mich.

J. V. CALDWELL,

CAMBRIDGE, ILL.,

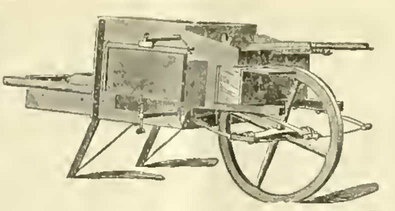
Wants every reader of the good old AMERICAN BEE JOURNAL to send his name and Postoffice address for a copy of his new Illustrated Circular of Bee-Keepers' Supplies. It may pay you to read it before ordering your supplies.

☞Beeswax wanted. 3w26t

PRIZE QUEENS FOR 1882,

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t



DAVIS' PATENT HONEY CARRIAGE,

REVOLVING COMB-HANGER,

Tool Box and Recording Desk Combined.

Carries honey from the hive to the Extractor, a set of apiarian tools, metal-lined drawers for broken combs and fragments of wax, revolving comb-hanger, which holds comb firmly while pruning or cutting out queen cells, writing desk, and wash basin; will not break nor bruise combs; adjusts to fit all sizes of extracting and brood combs, and is less laborious to handle than the ordinary hand-baskets. Write your address on a postal card, and address it to **JOHN M. DAVIS,**

30w1y Patentee and Proprietor, Spring Hill, Tenn.

$777 A YEAR and expenses to agents, outfit free, address **P O Vickery Augusta, Maine.** 36w1y

EVERY ONE NEEDING ANYTHING

in the line of **Apiarian Supplies**, should send for my Descriptive Circular and Price List. Sent free. Address, **F. A. SNELL,**

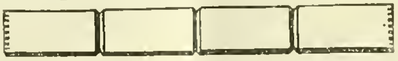
3w13tp Milledgeville, Carroll county, Ill.

DON'T FAIL

To try the NEW DEANE SYSTEM this season. Only **50 cts.** in stamps for a sample set, sent by express, at buyer's expense, or **30 cts.** in stamps for exact dimensions of that and the Star Chaff Hive. **C. H. DEANE,**

8w1t Mortonsville, Woodford Co., Ky.

Langstroth Hives & Sections.



Lewis' Improved One-Piece Section.

Price $4.50 per 1,000, any size to 6x6.

No. 1—First quality, dovetailed, any size to 6x6, $4.50 per 1,000.

No. 2—Second quality, dovetailed, any size to 6x6, $3.50 per 1,000.

No. 2 is planed smooth one side, same as No. 1, but lumber is not as clean and white.

LEWIS' ONE-PIECE BOXES, of white Basswood, all sizes, VERY LOW. No charge for boxing or crating sections.

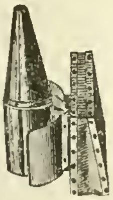
Send for new Price List.

G. B. LEWIS,

January 1, 1882. [1mtf] **Watertown, Wis.**

WANTED—Am organizing a 100 colony apiary—Send me Price Lists, and Samples Foundation. FRANK CHASE, Springville, Erie Co., N.Y. 9w1tp

OVER 20,000 IN USE.



The Original Patent

BINGHAM BEE SMOKER

AND

Bingham & Hetherington

HONEY KNIFE.

Send a card for testimonials, or half-dozen rates, to

BINGHAM & HETHERINGTON,

ABRONIA, MICH.

HEADQUARTERS FOR

Italian Queens, Bees and Fancy Poultry Eggs.

Send for Circular. **J. F. KIGHT,**

8w6t Poseyville, Ind.

1882. Consult your interest, and send for my new circular and price list of Colonies, Nuclei and Queens. Address,

9sm8t **S. D. McLEAN**, Columbia, Tenn.

SEEDS FOR

Honey Plants.

I keep at all times a full supply of Seeds for Honey Plants, including

Golden Honey Plant.

Melilot Clover,
White Clover,
Alsike Clover,
Mammoth Mignonette, &c.

Send for my catalogue which gives prices and instructions for planting—sent free upon application.

ALFRED H. NEWMAN,

972 West Madison Street, Chicago, Ill.

Homes in Tennessee.

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Inquiries about Tennessee answered by letter or through the paper, as requested. Address

THE TRIBUNE,

7w4tx **Knoxville, Tenn.**

WANTED **AGENTS** to take orders for the best selling book on **FARM** and **HOME** topics ever published. Sells at sight. Ladies can handle it. Has no superior in any language; 1,050 pages, with nearly 2,000 illustrations. Terms free on application. **50 Per Cent. to Agents.**

F. L. HORTON & CO., Pub'rs,

4w5tx **Indianapolis, Ind.**

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1w1y **D. S. GIVEN & C.**, Hoopeston, Ill.

THE KANSAS BEE-KEEPER,

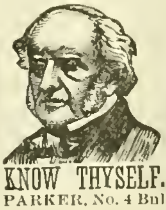
Devoted entirely to the best interests of those who keep bees. The question department, conducted by Dr. Wm. R. Howard, is of especial interest to beginners in bee-culture. Jas. Heddon will write a practical article for every number for 1882; 20 pages handsomely gotten up in book form. Every number worth the price of a year's subscription. Sample copies and premium list free to any address. Agents wanted. Address,

SCOVELL & ANDERSON,

28wtf Columbus, Kansas.

FOR SALE—150 Colonies of Italian Bees in improved Quinby hives, in prime condition.

39w1y L. C. AXTELL, Roseville, Warren Co., Ill.



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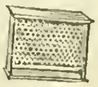
KNOW THYSELF.

FLAT-BOTTOM

COMB FOUNDATION,



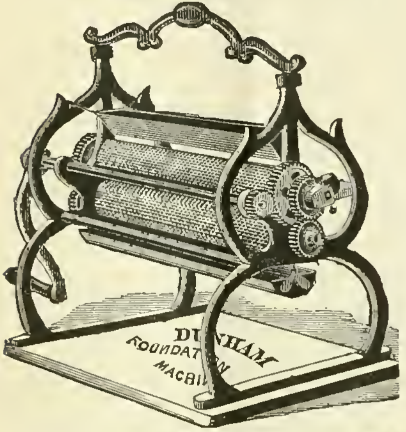
high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

FRANCES DUNHAM,

Inventor and Sole Manufacturer of

THE DUNHAM



FOUNDATION MACHINE.

Patented Aug. 23d, 1881.

☞ Send for New Circular for January, 1882.

CAUTION.

Having obtained LETTERS PATENT Number 246,099 for Dunham Foundation Machine, making comb foundation with base of cells of natural shape, and side-walls brought up to form an even surface; also on the foundation made on said machine, I hereby give notice to all parties infringing my rights, either by manufacturing said machines or foundation, as well as to all parties purchasing machines as above, other than of my manufacture, that I am prepared to protect my rights, and shall prosecute all infringements to the full extent of the law. **FRANCES A. DUNHAM,**

2w13t DePere, Wis.

Scribner's Lumber and Log Book.

NEARLY A MILLION SOLD. Most complete book of its kind ever published. Gives measurement of all kinds of lumber, logs, and planks by Doyle's Rule, cubical contents of square and round timber, staves and heading bolt tables, wages, rent, board capacity of cisterns, cordwood tables, interests, etc. Standard book throughout United States and Canada. Ask your booksellers for it. Sent for 35 cents post-paid.

G. W. FISHER, Box 238, Rochester, N.Y.

☞ Also for sale at the BEE JOURNAL Office. ☜
2w6m.

BASSWOOD SEEDLINGS

Four to eight inches, **$1.50 per 100**; three to four feet, **$7.00 per 100.** Address,

Z. K. JEWETT, Nurseryman,
6w8tp **Sparta, Wis.**

PURE HOLY-LAND QUEENS.

I make a specialty of rearing pure Holy Land Queens, and have now more than 100 colonies in their purity. All Queens bred from D. A. Jones' Imported Queens. Dollar Queens, before June 20, $1.25 each; after that date, single Queen, $1.00; 6 for $5.00; 12 or more, 75 cents each; Warranted Queens, 25 cents more each. Tested Queens, $2.50 each; Italian Queens, same price.

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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

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THOMAS G. NEWMAN,

EDITOR AND PROPRIETOR.

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TOPICS PRESENTED THIS WEEK.

Editorial—

The Cheap Queen Traffic.................... 145
Honey at our State Fair.................... 146
Food Adulterations before Congress 146
Testing the New Races.................... 147
Items..............................145, 146, 147

Among Our Exchanges—

Telephone for the Apiary.................... 147
Adulterated Food.................... 147
Sweet Clover.................... 148
Honey from Corn.................... 148
Continuous Honey Bloom.................... 148
One Pound Sections.................... 148
Seasonable Hints.................... 148
The "Square List".................... 148

Correspondence—

Does it Pay to Rear Dollar Queens?....... 149
Potatoes *vs.* Honey Production.................... 149
Beginning with Bees.................... 150
Glucose, Foul Brood, etc.................... 150
Pollen Essential for Brood-Rearing....... 151
The Dollar Queen Business.................... 151
Things I Do, and Do Not Believe.......... 152
The Pollen Theory—One Experiment..... 152
Temperature Required in Winter.......... 153

Selections from Our Letter Box—

Increase and Prospects.................... 154
Under Sized Bees.................... 154
A Prospect.................... 154
Bees in Excellent Condition.................... 154
Much Food Consumed.................... 154
Wintering Nicely.................... 154
Bees in Nebraska.................... 155
Sweet Clover.................... 155
Sure Cure for Bee Stings.................... 155
Metal Rabbets.................... 155
My Balance Sheet.................... 155
From Kentucky.................... 155
Light Wanted.................... 155
Early.................... 155
Heddon's Honey-Board.................... 156
Moldy Combs.................... 156
A Fair Record.................... 156
Bees Gathering Pollen.................... 156
An Early Start.................... 156

Special Notices—

The Apiary Register.................... 157
Binders for Bee Journal.................... 157
Clubbing Rates.................... 157

The Cheap Queen Traffic.

In this issue will be found two articles on the subject of rearing cheap queens, which take opposite and extreme views regarding the profit derived by the breeder. The first is a criticism on the article recently from the pen of Rev. A. Salisbury, who took negative grounds, and whose balance-sheet brought him in as a debtor. However extravagant some of his items may appear to a closer economist, certainly, with his long experience and facilities for economizing, where his critic might cut under, scores of prudent breeders would far exceed his expenses. The second article, from Mr. Alley, is corroborative of the experience of Mr. S. We presume this has been the case with nearly all who have been engaged in that traffic as breeders, unless it be those who have made tested queens a specialty, and have availed themselves of the "untested" feature to work off worthless trash.

We have long been convinced that "warranted" or "untested" queens were not only worthless, but an actual damage to the bee-keeping interest. One breeder, who has had more experience with cheap-priced queens than any other in America, or the World, and has probably reared and sold nearly as many as all the others combined, since he engaged in the business, says that "my opinion is, that not one queen out of ten sent out, is worth one cent." Another, who was until recently a very extensive breeder, in Michigan, of so-called "dollar queens," quit the business in disgust because it was a fraud upon innocent purchasers, and remarked that "such were usually not worth twenty-five cents a dozen."

That it does open a wide door for fraud no one can deny. It is not long since an extensive Western apiarist and queen-breeder remarked, in the BEE JOURNAL office, that he received an order from a dealer in Ohio for 100 queens; that the party ordering made no stipulation excepting that they were to be the daughters of pure Italian queens. So he examined through his several hundred colonies, and selected all the superannuated and worthless ones which he was intending to supersede, and for which he received 65 cents a piece. Of course, he remarked, it was so much saved. Many patrons must have been losers.

We know there are some, and may be many, honest, conscientious breeders of untested queens; but we do not believe, among them all, there is one who is reckless enough to expect to buy a single queen for $1.00, or 100 queens for $65.00, which would be fit to rear even untested queens from; and if not fit to rear third-rate breeders from, it would be a sarcastic compliment to any bee-keeper's stock to say they would be cheap to him at any price.

What bee-keepers in America want is better stock—not cheaper queens; more honey—not lighter yields; longer-lived bees—not greater disasters; certain profits—not doubtful results. We would be glad to know that all queen-breeders are doing a profitable business; but we certainly would dislike to learn that any are reaping a harvest at the *expense* of their customers. The fault is not with the breeder, let the stock be what it may, but with the purchaser, who demands and expects to get good stock at an unremunerative price, and generally pays dearly for what he buys.

Honey at our State Fair.

Mrs. L. Harrison, Vice President for Illinois of the North American Bee-Keepers' Society, has been laboring with the Executive Committee of the State Board of Agriculture, to get a liberal consideration of the importance of the bee-keeping interest in Illinois. She has met with some success, but not to the extent her persistent efforts have deserved. In a letter dated at Peoria, Ill., Feb. 27, 1882, to the BEE JOURNAL, she says:

You are aware of my endeavors to procure a large exhibit of honey products for the State Fair of 1882. As the result of this work I have to report, for the coming fair, an increase of double premiums over that of last year, and yet "I am not happy:"

Best lot of comb honey, not less than 10 lbs....................	$5 00
Second best do..................	3 00
Best lot of extracted honey.....	5 00
Second best do	3 00
Best machine for extracting honey........................	5 00

The Secretary writes: "I will only add—and not to be repeated—that large bodies move slowly, and you must not be discouraged. You have gained a little. I have added to the questions in the blanks, for agricultural statistics to be collected this year by assessors: No. of colonies of bees on hand May 1st, 1882, and No. of pounds of honey produced in 1881. These figures will show the importance of the busy bee."

I wrote to a number of bee-keepers and to publishers of bee literature, with reference to "special premiums." With but one exception all responded generously. I was in high glee over my success in this direction, until I received the following from the Secretary of the State Board:

"The Board, several years since, closed the State Fair list against 'special premiums.' It was not for the purpose of excluding such as you propose, but the door to special premiums, the line could not be drawn very well between legitimate offerings and those for advertising purposes, and it was thought best to exclude all specials from the list."

But the beggarly premiums offered are not for a moment to be thought the best results of Mrs. Harrison's work. As the Secretary writes her, "large bodies move slowly," and once moved in the right direction, by persistent effort, they accelerate in speed. We think the secretary's instructions to the assessors will result in furnishing a resistless motive power to move that large body with greater velocity in 1883. Meantime, much praise is due Mrs. Harrison for the interest she has taken in the matter, and we congratulate her on the partial success she has met with. That she has not met better success is not from want of effort on her part, but owing to the circumscribed material she had to work on.

Food Adulterations before Congress.

Our readers will rejoice with us in the fact that Congress is at last engaged in a work of reformation regarding food adulterations, and that a bill has been introduced having for its object the taxation of glucose and oleomargarine to such an extent as to greatly restrict their manufacture. The bill, after reference to the committee on ways and means, was by them submitted to Hon. Green B. Raum, Commissioner of Internal Revenue. His communication to the Secretary of the Treasury, accompanying the bill, will be found below, and will be read with deep interest, while his manly and undisguised condemnation of the glucose and oleomargarine traffic will command the admiration alike of all honest producers, consumers, and dealers.

It will be observed, Mr. Raum takes practically the ground assumed by the BEE JOURNAL more than two years ago, and which we have reiterated from time to time, that State and municipal laws were incompetent to cope with these bare-faced frauds, and that relief SHOULD and MUST come from Congress. In fact, so familiar is the language he employs, that, were his communication not of very recent date, we might fear that our articles had been more or less a reflex from him. While we surmised the inability of States and municipalities to cure the evil, he has learned by demonstration that we were correct, and that relief must come from Congress. It is so seldom we are called upon to express gratitude to officials high in power for unselfish acts of duty, that Mr. Raum's honorable communication is the more gratifying. The following is the document referred to, and we bespeak for it a careful perusal:

Treasury Department,
Washington, Feb. 14, 1882.

Hon. Chas. J. Folger, Sec'y Treas'y:

SIR—I have received, by reference from the honorable Committee of Ways and Means of the House of Representatives, H. R. 920, being a bill to amend section 3328 of the revised statutes of the United States, in relation to tax on native wines; H. R. 142, being a bill to tax the manufacture of oleomargarine, and H. R. 3170, being a bill to tax and regulate the manufacture and sale of glucose, with a request that I furnish the committee with the views of this office upon the merits of these respective bills.

The adulteration of food and drink is an evil which State and municipal laws and regulations appear unable to prevent under our multiform system of government, and it seems that if the people are to be protected against the frauds of manufacturers, who palm off wines charged artificially with carbonic acid gas as genuine champagne; prepared tallow, lard, or grease as genuine butter, and glucose produced from cornstarch by the use of sulphuric acid, and soda ash flavored with a small percentage of Louisiana molasses as the best of golden syrup, it will be necessary for Congress, in the exercise of its undoubted power of taxation, to make provision that these spurious and adulterated articles shall be sold upon the market for what they really are, and shall not be palmed off on a trusting public for what they are not, to the great enrichment of those engaged in their manufacture. Oleomargarine and glucose are manufactured almost exclusively for purposes of fraud and adulteration. It is safe to say that few householders would buy for their own consumption butter which they knew to be composed, wholly or in part, of oleomargarine, syrup which they knew to be nine-tenths glucose, and champagne which they knew to be spurious.

It is by deception only that such articles are sold, and it seems to me that Congress will perform a most acceptable service to the people of this country by passing the bill in question substantially as introduced. In connection with this subject the subjoined extracts from an article in Appletons' Annual Encyclopedia, for 1879, are deemed of interest.

I inclose herewith the bills referred to me, suggesting some slight amendments thereto.

Very respectfully,
GREEN B. RAUM, *Com'r.*

GLUCOSE.—The adulteration of syrups with glucose is a practice which has recently spread alarmingly. The extensive use of glucose, or the grape sugar of commerce, is held to be the main origin of Bright's disease of the kidneys, and the cause of the present prevalence of that fatal malady. The importations of glucose increased tenfold between 1875 and 1877, and at the same time extensive factories were established for its manufacture in the Western States. The article sold as grape sugar is manufactured by boiling cornstarch with sulphuric acid (oil of vitriol) and mixing the product with lime. A portion of the sulphuric acid and sometimes copperas, sulphate of lime, and other noxious principles remain in the glucose. In the analysis of seventeen samples of table syrup by Dr. Kedsie fifteen were found to be made of glucose, one of them containing 141 grains of oil of vitriol and 724 grains of lime to the gallon, and one from a lot which sickened a whole family contained 72 grains of vitriol, 28 of sulphate of iron (copperas), and 363 of lime to the gallon. The cheap sugars sold in Michigan are stated on the same authority to be adulterated with poisonous substances. Analyses of the sugar sold in New York reveal the presence not only of glucose with its inherent poisons, but of muriate of tin, a formidable poison; which is employed in the bleaching process. Mr. Fuller, a retired importer of sugar, called the attention of the United States Board of Trade, in their meeting held in New York in November, 1878, to the dangerous adulterations practiced with sugar, honey and molasses. Glucose is largely used to adulterate maple sugar, candies, jellies, honey, and other sweet foods.

OLEOMARGARINE—Which is now extensively manufactured from animal fat as a substitute for butter, is dreaded as a vehicle for infecting the human system with trichinæ and other internal parasites. The fat is not subjected to a higher temperature than 120° F. John Michels, a New York chemist, states that the refuse fat of one pork packing establishment is to his knowledge sent to the artificial butter factories, and Prof. Church found in oleomargarine horse fat, fat from bones, and waste fat, such as is ordinarily used in making candies.

It will be observed from the above, that the grape sugar of commerce and glucose are identified as one and the same product, and, as so often asserted by Prof. Kedsie, Dr. Kellogg, Prof. Newton, and all other chemical experts of any note, the difference in the two articles is only in name. Where a distinction is made, it is only as a technical quibble; but it has no foundation in fact. Glucose is no worse than commercial grape sugar, nor can it be any better, so long as it is the same thing, but in different shape.

◆

Testing the New Races.

Mr. W. S. Blaisdell, Randolph, Vt., makes the following inquiry:

> Please give in the JOURNAL the standard tests of purity for the three leading races of bees—the Italian, Syrian, and Cyprian? If you will do this, you will very much oblige me and others who are purchasing queens, and who wish to be able to indicate from the progeny what value there is specially in the class called "tested."

It will require great familiarity with the three races to be able to distinguish any difference readily. We have frequently been more than a little puzzled over the problem. Count Barbo, Vice President of the Italian National Society, in Milan, in alluding to the crescent on the corslet of the Cyprian bee, which is the only distinguishing mark, said that it was not uncommon for their Italian bees to show the same mark. At the National Convention in Cincinnati, in 1880, we exhibited some Italian bees preserved in phials of alcohol, as also one phial which was filled with bees on the Island of Cyprus, and four of the lots of Italians were unhesitatingly pronounced Cyprians by an expert present, who is quite as familiar with the new races as any man in America.

Perhaps the best test with those accustomed to handling the better Italians, is in opening the hives. While the Italians on the combs are slow, deliberate, and dignified in their movements, the bees from Syria and Cyprus are quick, nervous, and angular, hurrying and scurrying back and forth, and making every demonstration of anger, which is not always a feint. They are, too, less tractable with smoke.

◆

Do they Love It?—Speaking of the late Convention of glucose manufacturers in Chicago, the *Southern Cultivator* remarks as follows:

> They were in session several days and evinced a determination to prosecute their enterprise without abatement. Fifteen establishments were represented, and a permanent organization was accomplished for the mutual advancement of those engaged in this branch of manufactures. Despite the warnings of the press of the country, showing the danger attending the use of glucose, the people seem to be fond of it, as is indicated by its general introduction and large consumption.

We do not think the large consumption of glucose is because the people are "fond of it," but because they have it palmed off on them for pure sweets. The vile trash has no legitimate end—its only use is to adulterate. Its very existence is but a sham, a fraud and a curse; bringing disease and premature death upon thousands.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

Give Address.—Please, in the next issue of the BEE JOURNAL, give the name and address of the makers of the Vandervort foundation machine, and oblige, A SUBSCRIBER.

Lucia, O.

It is J. Vandervort, Laceyville, Pa.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Telephone for the Apiary.—Mr. Jas. A. Nelson, Wyandott, Kas., describes his telephone, in *Gleanings*, thus:

> Our telephone is sort of three concerned; has 3 ends—one at the house, one at the shop, and one at the barn. At either point I can hear the bees when they strike the wire; can hear a call to dinner while sitting at my desk in the office, and, in fact, have heard the hens cackle in the barn from the shop; so you see we know when to go after the eggs. It is a triangle, with a single wire running from each point, making 55 feet from house to shop; 60 feet from house to barn, and 80 feet from shop to barn. The house is brick, and I could not well cut a hole through, so I just raised the window about 5 inches and put a board in the opening; where the wire passes through the board is a one-inch hole, covered with soft sheep leather; the wire through the leather is in the center of the hole, so the cold air and the bees are kept out. I think Mr. Gallup is needlessly alarmed about the bees killing themselves on the wire. I have watched them, and all I have seen strike have been rising from the hives, and it merely turns them from their course a little. I have not seen one fall to the ground.

◆

Adulterated Food.—The *Maine Farmer* reports as follows on this subject: It is a "burning shame" that such frauds have not been stopped by Congress long ago. Let us hope that it will now be done speedily. The *Farmer* says:

> A citizen of Bath recently bought some granulated sugar in that city. On melting some of it for making preserves, a quantity of blue scum rose to the top which alarmed the family. It is supposed that some of the best refiners use blue clay, and some of the poisonous analine blues to improve the color of their sugars. This led to the testing of cream of tartar, which was purchased from the same dealer, supposing it to be pure, and it was found that more than one-third was a sediment which would not dissolve. The substance used for coloring sugar is ultramarine, and is used for the purpose of covering up some defects in the product, and as for cream of tartar, not one pound in fifty sold by grocers is pure. The adulteration amounts to one-half.
>
> It is terrible to think that little children should have to suffer for indulgence in sweets, but so it is. We grown people stand by and see the health of our little ones vitiated because we must not interfere with trade. But this is a nefarious trade which gives us foods that act inju-

riously upon our frame, and particularly when we are young. That trade should be done away with, and the trader should be forced to stop it, if his own conscience does not do so. A time will come when it will be scarcely credited, that in our advanced nineteenth century, it was possible in open day to sell to little children, things that would poison their blood.

Sweet Clover.—The editor of the *Bee-Keepers' Instructor* makes the following remarks on this honey producer:

> This is destined, we think, to become the great honey plant of the future, its great adaptability to soil and climate, the ease with which it can be raised, the great length of time it continues in bloom, and the fact that it can be grown on waste places and barren land, all being points in its favor, that will recommend it to every bee-keeper.

Honey from Corn.—Will bees gather honey from corn? is answered by a correspondent of *Gleanings* as follows:

> Yes, and lots of it, too, sometimes. They gather it from the tassels at the same time they gather that dark-green pollen. I always know what my bees are working on. It is not every year they get a large amount, say about as often as one year in four or five. I have had them average from 5 to 10 lbs. per colony of the nicest honey. It comes after basswood.

Continuous Honey Bloom.—One by one they come to the music, take up the refrain, and join the chorus concerning continuous honey bloom. This was begun by us as a "solo" 3 years ago, and we now feel certain that ere long its "swelling chorus" will fill the World. The *National Agriculturist* adds its note thus:

> No topic is more worthy the earnest consideration of bee-keepers, than that of bee-forage. It often happens that our bees can find honey for not more than 5 or 6 weeks, and yet in that brief time they will often store 50 to 200 lbs. per colony. What might we expect if the nectar-secreting flowers were to bloom the entire season through? The September flow of honey, often exceeding the yield in spring, in some parts of the country, answers the question. How we may supplement the natural yield of honey by judicious planting of honey plants, may well receive earnest thought and consideration during the winter. We already know that by planting figwort, cleome, catnip, borage, mustard and alsike clover, we may bridge over the famine of honey bloom. Of these, alsike clover is good also as a forage plant for cattle, etc., and by cutting a portion of the crop as soon as it comes into bloom, we may secure a second crop of flowers, and so a continuous yield of honey-producing flowers. Figwort and cleome, though of no other use, furnish abundance of good honey, and that too at a time of usual dearth. The thoughtful apiarist may with profit give to this subject much study during the leisure of his winter hours.

One-Pound Sections.—Mr. J. H. Martin, Hartford, N. Y., remarks as follows in *Gleanings*:

> The recent action of the North-eastern New York Association in relation to the proper size for section boxes, is much like the "pope's bull against the comet." If the market demands pound sections, and they sell better, why not leave the bee-keeper free to use what size he desires? I think the pound section has been upon the market too long to be now withdrawn. It is safe to say, that over half of the crop of comb honey for the coming year will be stored in one-pound sections; furthermore, as far as I have read the proceedings, I should call it a comb-honey association. The production and sale of extracted honey has not received the attention it should.

Seasonable Hints.—Mr. Dougherty, in the *Indiana Farmer*, gives the following on stimulative brood rearing:

> It is not necessary that an ordinary sized colony of bees should occupy the entire brood apartment of the hives. Indeed, it is much preferable that they be confined on as few combs as they will well cover. So long as the queen has room to lay, there is no danger from over crowding, care being taken that they do not run short of stores. With the reduced space to occupy, they can much better keep up the requisite heat for necessary brood rearing. After the combs which they occupy become well filled with brood, more room should be given them, by spreading the brood and inserting an empty comb in the center of the brood nest. If on examination the center combs are found quite full, while those on the side yet contain room, it is better to change position of the combs without adding more, until all the comb in the hive is filled very close up to the top-bar. Just here we wish to caution you about spreading the brood too fast. So long as the queen has room in which to lay, they do not require any more room. Brood rearing proceeds very slowly in the early part of the season, and it takes them quite a while to fill the first four or five combs which they occupy with brood, and the cluster increases very slowly, the old bees dying off quite as fast as the young ones increase. Confining the bees to a few combs necessitates the use of a division-board, and they should be kept covered up as warm as possible to assist them in retaining the necessary heat. It is very essential that all colonies be made good and strong by the time the honey harvest begins, and to do this, that operation should be commenced 5 or 6 weeks before that time. The first thing to be done is to give all colonies a thorough examination, ascertain the condition of the colony, and the amount of stores on hand, remembering that as soon as brood rearing commences, the stores will be consumed very rapidly, and unless they have plenty, provision must be made to supply their needs, and when feeding is once commenced, it must be continued until such time as they can gather a sufficiency to keep going.

The "Square List."—Novice has started a list of dealers in apiarian supplies, which he calls a "square list." We notice that he does not put himself into that list; but in place of that, in *Gleanings* for March, he remarks as follows:

> If you wish to deal with some one who always has everything right, every time, and never makes a mistake, don't send to us. If, however, being always ready to make good every error, the minute it is discovered, will do, send along your orders, and we will be glad to serve you.

And in the same paper, Mr. W. Z. Hutchinson gives the following good reasons for not being included in that "square list":

> I can subscribe to the declaration with which the "square list" is headed; yet there is something repugnant to me about the whole business—this advertising, in this manner, one's honesty and good name. Public opinion says, that the physician must not advertise his wonderful skill; it says: "Let his works speak for themselves;" and I say, let a man's works or dealings speak for themselves. Dealer after dealer has advertised to "guarantee satisfaction;" but, judging from the manner in which some of them deal, it must have been unto themselves, and not unto their customers, that they guarantee satisfaction. A bee-keeper once said to me, "When a man advertises, or boasts of his honesty, I think it advisable not to trust him too far." Please don't think that I am casting reflections upon those whose names have already appeared in the "square list"—far from it. I consider them the squarest of square dealers. Perhaps, though, if I had lost a good round sum through the dishonesty or negligence of some "scaly" dealer, I might feel differently about this matter.

☞ The Lancaster, Pa., *Farmer*, makes the following kind mention:

> The AMERICAN BEE JOURNAL, the oldest and ablest paper devoted exclusively to progressive bee-culture, published in the country, is now issued in a royal octavo form, weekly, at $2.00 a year, by Thomas G. Newman, at Chicago, Ill. This is a far better and more convenient form than that of a quarto, in which it was issued in 1881. But, whatever its form may have been, its substance is, and always has been, of the highest apicultural order, and we do not see how any one who makes bee-keeping a specialty, can afford to do without it.

CORRESPONDENCE

For the American Bee Journal.

Does it Pay to Rear Dollar Queens.

W. Z. HUTCHINSON.

Mr. Salisbury, in any discussion that we may have as to whether it is profitable to rear dollar queens, would it not be better to say nothing as to whether it is profitable to *deal* in them? It is a subject about which *we* know nothing from actual experience, at least *I* do not, and I presume that you are equally ignorant. If a man owns a paper, and sees fit to advertise his wares in it, that is *his* business; and if he gives his subscribers a good paper, one worth the subscription price, no one ought to complain, had they? Please do not let us have any more discussion upon this point—unless in a separate article—but turn our attention to the question: does it pay to rear dollar queens, i. e., does it pay the ordinary queen breeder, one who does not own a bee-paper?

According to the figures that you gave, on page 104 of the BEE JOURNAL, it appears that it does not pay. But are those figures imaginary, or do they represent the results of an actual experiment? If the former, they prove nothing; if the latter, they either show bad management, or a poor location; perhaps both. You say: "For circulars, advertising, and correspondence, $90." That $40-a-month expert should print the circulars and price lists upon a cheirograph, and no circulars sent out unless called for. The majority of people have so many circulars shoved under their noses, that they are sick of the sight of them, and toss them, almost unnoticed, into the waste basket. And now in regard to advertising, Mr. S., I hope that you will not be offended if I ask, if *you* have not indulged in too many "spread-eagle" ads.? Do you suppose that cut of a nice, large, queen bee, with which so many of your ads. have been adorned, ever brought you any customers; if so, how many? Again you say: "500 cages, $50." That $40-a-month expert should make the cages. If he does not have time to make them, and attend to the bees, *I* will furnish them for ½ the money, and can clear $2 per day while making them. In regard to the loss of queens while in the mails, I do not know whether your estimate is too high or not; but it is a greater loss than *I* have ever experienced. "Syrup for feeding 100 nuclei, $100." Three years ago, in August and September, I was obliged to feed, in order to keep things moving; but the entire expense was only about 15 cents for each nucleus, during the two months of feeding. It was grape sugar that I used for feeding. In all of my queen rearing this is the only time, with perhaps two or three slight exceptions, that I have found it necessary to feed, my nuclei usually storing some surplus, and after consolidating them in the fall, they have always had plenty of honey without feeding. "Lamp nursery and oil, $7." Mr. S., you ought only to charge, had you, for the *interest* upon the money invested in a lamp nursery, and for the oil burned? Which certainly would not amount to $7. You speak of capital invested in nucleus hives, etc., to which I take no exceptions, unless it is to remark that many breeders go to the expense of making a small hive for each nucleus, when, by using division boards, and putting 2 nuclei in an ordinary hive, nearly ½ the expense for hives could be avoided. You speak of "queens to be replaced when complaints are made." This is something that I know but little about, having had to use only two queens in this manner. Neither do I "cut up combs for eggs to rear queens from." I merely cut holes in the combs; cells are built around these holes, and, after the queens have hatched, the combs are given to some strong colony, and the bees immediately refill the holes with comb. You say that "in running 100 nuclei it is out of the question for one hand to keep them filled with queens against their will." I, at one time, had nuclei, and that was at a time when but little honey was coming in, and yet no nuclei ever remained queenless 1 week at a time, 2 days being the average; and when honey is coming in plentifully, a young queen is usually given to a nucleus at the same time that a laying queen is removed; and, 9 times out of 10, she is accepted. Please allow me to copy a leaf from my account book. Bee account, Dr. to interest on $200, invested in 15 colonies of bees, and the necessary hives and implements, $16; advertising, $30; postage, $20; stationery, $1; materials for queen cages, $3.75; oil for lamp nursery, $1.25; queens lost in the mails, $20.70; total, $92.70. Bee account Cr. by an increase of four colonies, at $7, $28; 600 lbs. honey, at 15 cents, $90; 375 queens, at an average price of 90 cents, $337.50; total, $455.50; profits, $362.80.

The above is my bona fide account for the year 1880, which was my most prosperous year. Last year we had a late spring and I did not commence queen rearing until about a month later than usual, and my profits from 18 colonies, were only $277.74. In making my reports I have never counted my time, simply because other bee-keepers have not done so in making their reports; but if I should deduct $160 for my labor, do you not see that there would yet be a good profit? And the expert at our house not only cares for the bees, but he cares for a nice, large garden, a squash patch of a quarter of an acre, and a potato patch; he splits the wood, milks the cow, helps take care of the babies, and does other chores too numerous to mention.

Mr. S., you may have kept bees 20 years, and yet have to learn how to rear dollar queens at a profit. I know a bee-keeper who has kept bees 20 years, and kept them in large numbers part of the time, and yet he has never made the business very profitable; many of the years it was a bill of expense. Five years ago, I had never opened a bee-hive, although, from reading, and from visiting apiarists, I had a good theoretical knowledge of the business, yet in the five years that I have been engaged in the business, during four of which I have reared dollar queens, my average profits, per colony, have been about $18 each year. If I deduct $160 for my labor, my profit would average about $10 per colony, each year.

Many men say that farming is not profitable; and, judging from the manner in which they conduct the business, and the results that they obtain, it certainly does not appear *very* profitable; while others amass small fortunes in following this occupation. A few have obtained great riches by engaging in mercantile pursuits, while thousands upon thousands have failed in the business. Some bee-keepers say that foul brood cannot be cured with salicylic acid, while others have cured the disease with the acid. Some bee-keepers assert that dollar queens cannot be reared at a profit, while others do rear them at a profit. If they do not, why do they continue in the business? It makes no difference to me what course others pursue, when I cannot rear dollar queens at a good fair profit, I shall drop the business so quickly that it will fairly make your head swim.

In a good honey season, I presume that the raising of honey would be nearly, if not quite, as profitable as queen rearing; but in a poor season, by a little judicious feeding, queen rearing can be made more profitable than the raising of honey.

The above criticisms are plain and out-spoken, but they are made with a kindly spirit, and I trust that they will be received in the same manner

Rogersville, Mich.

For the American Bee Journal.

Potatoes vs. Honey Production.

J. H. MARTIN.

It is very evident that our German friends, mentioned by A. R. Kohnke, on page 104, were not successful culturists of the potato, and it seems that Mr. K. agrees with them, and advises that our potato lands be sown to honey producing plants.

I am strongly inclined to think that it would not pay. I live in the midst of a great potato-growing region. This (Washington) county is the banner potato county in New York State, and our shipments reach about four millions of bushels annually. In this vicinity the farmers plant from 8 to 50 acres each. Suppose one farmer who plants only eight acres has also bees; his potatoes last fall yielded an average of 150 bushels per acre, and were sold for one dollar per bushel or $1,200. Now, if he had planted the eight acres to the most approved honey plant, to make the value equal to the potato, each acre would have to yield

1,500 lbs., or a total of 12,000 lbs. of extracted honey, at 10 c. per lb., $1,200. Who knows that 1 acre can be made to produce 1,500 lbs., or even 300 lbs., which would be equal to 100 bushels of potatoes per acre, at only 30 cents. per bushel.

Our farmers, even though they keep bees, would scout the idea of giving up their potato land to honey plants. I think, for our location, I could advise a better plan: Sweet clover seems to grow very rank upon poor, hard, clay soil. I have in mind two fields of 30 acres each within range of my apiary, one is used for grazing and the other for a meadow. The pasture produces very scanty forage, while the whole meadow yields but about 5 tons of hay. If both of these fields could be sown to sweet clover I imagine that several thousand pounds of honey would be the result; the pasture forage would be greatly increased, and the land soon be in better condition to produce hay or grain. But as the land does not belong to me, I shall not have the pleasure of beholding it covered with the nectar-producing plants. I hope Mr. Kohnke will receive seeds to sow those acres, and will be enabled to give us some idea how much honey an acre will produce.

If the yield from one plant could be estimated, how it would aid us in determining the approximate yield from an acre, if the acre is planted in rows like corn, so like corn the yield could be quite correctly demonstrated.

Hartford, N. Y.

For the American Bee Journal.

Beginning With Bees.

W. F. CLARKE.

"A man up a tree" has been writing on the above subject in the New York *Tribune*. Some of his advices are wise, and some otherwise. The first suggestion to one determined to make bee-keeping his "life-work," but "entirely ignorant of the art," is, to "begin with a few colonies—from 2 to 6 is enough." The second is, to "procure some good, reliable work on bee-keeping, and study it with care."

These counsels should be reversed. A person who has serious thoughts of making apiculture his "life-work," should study a good bee-book first, that he may get some idea of the amount of knowledge to be acquired, and that he may judge of his own aptitudes for the business. Tyros, generally speaking, suppose that the principles of bee-keeping are few and simple, easily picked up, and require but little thought and application. One of this class attended a convention of bee-keepers, listened to a single evening's discussion, and went away convinced that it was useless for him to attempt to master the ins and outs of apiculture. He had not the requisite application. It has been said of Queen Victoria that she could never learn to sing, for three reasons: 1st, she had no voice, 2d, she had no ear; and 3d, she had no application. The latter was the true reason. With application, anyone can become a singer of some sort; and with application, anyone can become a bee-keeper on a small scale. But application alone will not make a *prima donna*, nor will application alone make a man qualified to be an extensive bee-keeper. He must be possessed of certain natural qualifications. There must be quick perceptive powers, quiet and steady perseverance, self-control and coolness of nerve, business promptitude and sagacity; last, but not least, a degree of imperviousness to bee-stings. A person peculiarly sensitive to bee-poison, whose flesh swells enormously, and whose blood fevers quickly under its influence, may keep a hive or two for scientific investigation and interest, but would be courting martyrdom to make bee-keeping his "life-work."

One colony, generally speaking, is enough to start with. The probabilities are that the beginner will lose that, through some error of management. The loss of one colony will not be so discouraging as the loss of "two" or "six." If he does not lose his first colony his bees will probably increase quite as fast as his knowledge and experience. If they do not, he can buy more bees when he feels competent to take care of them. Localities need testing as well as bee-masters, and a few colonies will suffice for that.

This "man up a tree" advises a beginner to make himself familiar with his bees, in order that they may know him personally, and find out that he is their friend. Considering that during the honey season, when we have most occasion to handle bees, their average life is not over three months, there is little chance to cultivate friendship with them. Besides, the first smell of you they decide whether to treat you as a friend or a foe. No kind treatment that you can give them will ever change their dislike of you into love. Be gentle with them always; but gentleness will not conquer their aversion if they have taken a "sconner" at you. It is people who are bee-loved who should make a "life-work" of apiculture. The most that others can do is to let the little insects know from the start that they have their master.

This writer says, "care and prudence, with occasional mishap, will cause the beginner to lose all dread of the business and of his bees." Well, that depends on how much they *hurt* him. If he is thick-skinned, and his blood so cool that bee-virus cannot heat it up, he will soon come to care no more for a bee-sting than for the prick of a pin. But if he is thin-skinned, and bee-poison injected into his blood is like the mixing of seidlitz powders, his respect for the business end of a bee will continue unabated to the last day of his life.

Here is some good advice:

"He should indulge no hopes of suddenly becoming an expert, or rapidly accumulating a fortune at this business. There is no short cut to success here any more than anywhere else. If pursued rationally and perseveringly, he will, in the course of some years of faithful apprenticeship at the business, gain ability to handle and manage from 100 to 1,000 colonies of bees. He cannot possibly manage this number at first successfully, any more than he could conduct large manufacturing industries without having previously studied and worked at the business."

"Unfortunately no one industry (except, perhaps, mining) has been brought into so much disrepute as bee-keeping, by all sorts of characters undertaking to carry it on, on a large scale, without adequate previous experience or study. The very ignorance of the many who keep a few bees has made the business a fruitful field for the operations of quacks and quack vendors of all kinds of so-termed wonderful hives and queens. This is all the more unfortunate because bee-keeping can be made as legitimate and honorable and successful, and is so made by many, as any other avocation."

This writer advises beginners to pick out their own pathway to knowledge and success, rather than serve a "personal apprenticeship to a professional." He admits that "the latter has its advantages," but considers that the most successful bee-keepers have been self-made. This may be quite true, but has it not been because bee-keeping has only of late become one of the fixed or exact sciences? Apprenticeship to mere "professionals" may not be worth much, but there is no way in which an observant mind can so soon or so thoroughly acquire a mastery of this business as by spending a season or two with a thoroughly practical bee-keeper. In time, no doubt, apprenticeship to this business will be the usual thing, as in the case of any and every other. Perhaps in "the good time coming" this may rank among the learned professions, and B. M. (bee-master or bee-mistress) be as common and proper an affix to people's names as M. D. or M. A.

Listowel, Ont.

For the American Bee Journal.

Glucose, Foul Brood, etc.

CHAS. F. MUTH.

Allow me to forward you a slip from one of our dailies, giving Commissioner Raum's address to the Secretary of the Treasury, for fear you will overlook it. The opionion of an authority like Mr. Raum should be read by every bee-keeper. According to it, we are not aware yet of all the danger our health is subject to by the use of glucose. It is due to the representative of our (Hamilton) county, Ex-Governor Thos. L. Young, to state that it was him who introduced the bill to levy a high taxation on glucose manufactories, so as to make the manufacture of the vile stuff next to an impossibility. The purpose of the manufacturer being, in the first place, the "making of money" of course, but, secondly, the preparation of an article for adulterating purposes.

The reply of Mr. Jones to Mr. A. R. Kohnke's foul brood matter shows that he went through real practical tests, just as we can expect of him. His article shows that he did not give us for facts matters of which he had read only. We know Mr. Jones to be a bee-keeper of sound sense and great experience, and I wonder why he did not succeed with my remedy, supposing salicylic used to be of the same properties in Canada as in the United States. I am certain he has blundered somewhere, otherwise his cure of foul brood would have been easier and surer than with the starving process, which I have tried to my satisfaction, and in which I had a first class ally, Mr. Joseph Savage. It appears to me that I am better posted on the foul brood question than Mr. Jones, and I shall try to convince him of that fact (if such it be) in the course of a week or two, when I may have more leisure than I have just now. I am not alarmed that I shall offend, because such controversies are generally accepted in the same spirit in which they are given. Besides, Mr. Jones and myself know that neither one of us knows all about it, and both of us are still willing to learn.

Cincinnati, O.

[The article referred to above, and for which Mr. Muth will please accept our thanks, will be found on page 146 of this issue.—Ed.]

Rural New Yorker.

Pollen Essential for Brood-Rearing.

G. M. DOOLITTLE.

Of late much has been said of the deleterious effects of bees eating pollen as a winter diet, and out of it there seems to have grown the opinion in the minds of some that pollen is a necessity when brood is being reared. In other words, it is claimed by some that no brood can be reared without pollen, for we find in a prominent work on apiculture these words: "We are interested about pollen because bees cannot rear brood without either it or some substitute for it." Again: "They (the bees) had no pollen and, of course, no brood-rearing could go on without it." Also we find these words coming from high authority: "I have further stated that pollen was an indispensable requisite to brood-rearing; that it is an essential element in the food of larval bees;" after which the writer goes on to give circumstantial evidence to substantiate his position, without giving any positive proof that such position was correct. As positive evidence in court is considered to be of greater value than negative, I desire to give some such proof that the above writers are mistaken.

Some years ago I learned that a neighbor, living about a mile away, was to kill his bees the next day by the method practiced by our forefathers called "brimstoning." Accordingly I went and saw him, and got permission to drive out the bees and save them from such a cruel death, if I would secure to him the combs and honey. After obtaining the bees I carried them home and put them in a hive together with six frames of nice, new comb without pollen. They were then fed very thick sirup made from standard A sugar, until I considered they had sufficient stores for winter. As it was late in October, they had but two chances to fly after they had been brought home and placed in the cellar for winter. We have no flowers yielding pollen late in the fall, consequently no pollen was obtained. Along in the fore part of February I commenced to stimulate them by jarring the hive to arouse the bees into activity, so that they would feed their queen. This was repeated afterwards by way of experiment. About the middle of March a fine day occurred when these bees were set out for a fly, as was our custom at that time. After their first excitement at being out in the warm sunshine had somewhat subsided, the hive was opened and, much to my satisfaction, I found brood in two combs, amounting to nearly half a frameful, comprising eggs, larvæ and sealed brood, with now and then a hatching bee. At night they were returned to the cellar, where they remained till the middle of April, when I found their numbers had much increased and that they had doubled their brood. I then began to feed flour, which they worked on eagerly as bees generally do in early spring.

Here I wish to introduce another person giving positive evidence, for "in the mouths of two or three witnesses every word may be established." This person is no other than Mr. E. Gallup, for whose opinions on apiculture I have the highest respect, and who was considered high authority a decade of years ago as an apiarist. He tells us in the *Bee-Keepers' Journal* for October, 1870, of an experiment he had made by way of putting a small swarm of bees in a hive late in the season and feeding them till they had built thin, small pieces of comb, when they were placed in winter-quarters "without a particle of pollen." He then tells us how he began to stimulate this little colony about the first of February, and says: "The queen commenced breeding, and by the time the bees first flew out in the spring they had doubled their number," and this without a particle of pollen. Next we find on page 265 of the *Bee-Keepers' Magazine* for 1880, these words from the pen of Prof. Hasbrouck: "They are certainly wrong who say that pollen is indispensable to the raising of young bees, because I have had, as an experiment, abundant brood reared by bees shut up on new comb and fed on refined sugar sirup when they could not possibly get a grain of pollen from any source." This, coming from an apiarist of close observation, can be relied upon, which, with the testimony of others, proves conclusively that brood-rearing, to a considerable extent at least, can be carried on without any pollen whatever.

From many observations made during past years, I am of the opinion that the state of the surroundings, such as warm or cool weather, plenty of honey being secreted in the flowers, or no honey at all, a desire to keep up a rapidly diminishing colony, or a perfectly healthy one, has more to do with brood-rearing than plenty of pollen. That the "scramble" for pollen in early spring excites brood-rearing no one will deny; but pollen may come in quite as freely in the latter part of September, and yet no brood-rearing at all be the result. Much depends upon whether the bees desire brood or not; if they do, they will rear it without pollen, as our experience proves. If they do not so desire, a hive full of pollen has no effect upon them. Anything exciting to activity has a tendency toward brood-rearing, while that tending to quietude gives a reverse result.

Borodino, N. Y.

For the American Bee Journal.

The Dollar Queen Business.

HENRY ALLEY.

I am glad to see the dollar queen question brought up again. I hope that those who purchase queens will be convinced that queens cannot be reared and sold by honest dealers at so low a figure, and give the producer a living. I think most of our customers are willing to pay a fair price for queens. I know, to my sorrow, that queens cannot be reared at such prices. I am not like some who write on this question, as I do not think the queens should be poorer for being sold at a low price. I have contended for a long time that the manner of rearing, and not the price, is the cause of poor queens. Last year was the only year that I did not lose money at the queen-rearing business. There is a call for about 12,000 queens each year. I cannot rear over 1,500 of that number, even in the most favorable season. It takes all my time from the first of May to the first of October. Then the expense of rearing them eats up a large sum here in this State, on account of the great amount of feeding to be done. Last season I fed out 1,400 lbs. of sugar, besides several hundred pounds of honey. Add to the above the large number of colonies of bees that must be destroyed to fill 250 nuclei and to keep them replenished with bees for 5 months; then comes the full colonies that we rear queens in; then the postage on the queens, letters, postal cards, circulars, and advertising bills. I find it pretty hard work to get money enough in the fall to pay my bills—I certainly cannot get it out of the queen-rearing business. Now, what do bee-keepers want queen-breeders to do—keep on losing money, or stop rearing queens? I have been rearing queens so many years that I cannot feel like giving it up; it is like a second-nature to me. I have kept at it for several years, hoping that something would turn up so that a fair living at it might be made, and know of others who have done the same. Nothing seems to have turned up that has helped the case any, and at this time there are no indications that there will be anything done to help the queen-dealer.

When the word "purity" is left out, or when purity is made secondary matter in ordering queens, then, and not till then, will the "coming bee" be found. I will not say that pure bees of any race are not as good as hybrids, but purity should not be sought for at the expense of all other qualities. If bee-keepers will be satisfied with queens as pure, and no more so, than those sent us from across the water, I think they will be better satisfied that purity (strictly pure and handsome bees) is of no account whatever. Of course, we all like the beautiful orange color of the Italians, but are those beautiful bees any purer than those not quite as handsome?

Queens should be reared and tested for business, and not for purity. In ordering queens the purchaser should say, "please send me a queen that you know to be very prolific, active, and vigorous; let her be a pure Italian if possible, but send me a good one or none, as I want to obtain honey," etc.

Who will deny that a good home-bred queen is not worth $2.00? One good queen is worth more than all the poor ones ever reared. My opinion is, that not one queen out of 10 sent out, is worth one cent. My advice to purchasers is to purchase good queens and pay a fair price for them, and not only have purity, but longevity and prolificness guaranteed.

I will make a suggestion: Let all the leading queen-breeders combine, and resolve not to sell queens less than $2.00 each, and not sell any that are not thoroughly tested; then, if bee-keepers want a cheap article, let them purchase of those who have not had much experience at the business.

Wenham, Mass.

For the American Bee Journal.

Things I Do, and Do Not Believe.

E. B. SOUTHWICK, M. D.

There are some things that I believe, and some things I do not believe. I will give some of them, and my reasons for the same, and I wish the reasons considered and nothing more, for a belief or an opinion without a reason is of no use whatever:

1. I do not believe that the queen always lays her eggs where they remain until they hatch.

2. I do not believe the bees feed pollen to the larvæ in the cells.

3. I do not believe that in cold weather bees that are in the outside of the cluster work their way into the center and get to the honey; but I believe the bees from the inside of the cluster come out on to the outside, and by so doing crowd those on the outside in, so they can get to their food.

4. I believe that starvation is the direct cause of dysentery in bees.

These 4 are enough for one article. My reason for the first is, that I have seen on combs where the queen had lately commenced laying, eggs scattered promiscuously through the combs; I have traced rows of them from one end of the comb to the other, and criss-cross in every direction, as irregular as rabbits' tracks on the snow. I have also seen 2 or 3 eggs in 1 cell, and cells by the side of these without any. But when they were hatched, I have always found them in regular circular form, no cell missed, and no cell with more than 1 larvæ in it. From this I conclude that the queen lays her eggs, and the workers place them where they ought to be.

My reason for the second is, on examining the cells after the bees have put in the feed for the larvæ, we find it consists of a milky substance not like pollen or honey, or a mixture of the two. I, therefore, conclude that the bees eat the pollen, which excites some gland to secrete this feed for the larvæ, the same as some medicine will produce an action on some gland in the human system. The bees may have some way of bringing this gland into action without pollen; if so, that would account for the rearing of brood without pollen, as we sometimes hear of their doing.

For the third, on opening a hive in cold weather we find the bees on top and outside of the cluster so stupid they can hardly crawl. I think it would be impossible for those bees to work their way down to the honey. The business bee that comes out to inquire into the cause of the intrusion, comes from the center of the cluster; from this I conclude that the bees in the middle, when they get their fill of honey come to the outside, and take a position over the stupid bees. A continuation of this brings the stupid bees in on to the honey, and when they have filled themselves they become lively and take their place on the outside again.

"Fourthly," as the minister says, the cause of dysentery is a subject that bee-keepers differ very much about, and certainly I do not wish to be deceived about it. Since I stated last spring in the BEE JOURNAL that I thought the cause was starvation, I have studied considerable to ascertain, if possible, the real cause. I have treated many cases of dysentery among human beings caused by bad air, bad food, or any other poisonous substance taken into the system, and have found that perfect quiet, proper medicine, and little or no food, was the most sure way of curing the disease. But that is not the case with bee-dysentery—it is right the opposite, a general stirring up, when they can fly without chilling, and plenty of good, rich food, is the remedy, and it seldom fails.

The question comes up, is it the same disease produced by the same causes, and cured by so opposite a treatment? The conclusion is inevitable that it is not, and that it is not caused by poisons taken into the system. After I came to this conclusion, I commenced to search for dysentery from some other cause. On reading Mr. Chossat's (of Paris) experimental investigation on the effects of starvation on the lower animals, there I found two effects that I think will touch on our case. The one was that the muscular force lost only 42 per cent., and the nervous not quite 2 per cent. The other was "at first a scanty excretion of dry, bilious grass-green feces, and afterward diarrhea of liquid saline matter. Do not these effects show our case exactly? They have lost very little of their nervous power, and have six-tenths of their muscular strength. Our bees that have the dysentery when they fly out, show much nerve and strength, even if they are so far gone that they cannot get back to the hive; but if they get back and get their fill of honey, they are soon all right (notice how quick Tanner regained his strength after his 40 days' starving). The diarrhea needs very little comment; it is our bee-dysentery exactly. But, it will be asked, if starvation produces dysentery what produces starvation when there is plenty of honey in the hive? I answer, anything that will stop the evolution or the regular action of the bees, as mentioned in No. 3. In case of long confinement, the bees become less active the longer they remain in the hive, if nothing disturbs them, and they may get so the inside bees fail to come out and take the place of those on the outside, until they so far starve as to show the symptoms of starvation, and unless there is a change death will be the consequence.

Again, in case of dampness in the hive, the bees will get stupid much quicker in a damp atmosphere than in a dry one, and the bees that come out from the center, if they find the bees and comb wet outside, will crawl back again rather than crawl over their wet companions, and the outside ones are abandoned to their fate; but if the weather soon becomes warm, the bees by their activity will get up heat, and by using their wings will get up a breeze and dry off the combs, and all is right again.

Also the bees may have commenced rearing brood, and those inside bees may be employed eating pollen, secreting food, and caring for the young, and the outside ones entirely neglected, and if the cold continues long, starvation and dysentery will be the result with those outside, and spring dwindling of those inside. It may be asked by some one why one colony may have the dysentery and another, under the same circumstances, not have it?

I will answer that by asking another, why will one colony under the same circumstances gather more honey than another? My answer to both is, I do not know.

Mendon, Mich.

For the American Bee Journal.

The Pollen Theory—One Experiment.

JAMES HEDDON.

Last Thanksgiving day we put 40 colonies into an out-door cellar; 4 of them were occupying our nucleus-sized frames, and were nearly all out of honey. I wished to save them to aid me in early queen rearing. About one year ago now I caught the sugar-brick candy fever, and made some 30 2-lb. bricks. One batch, of some 4 bricks, I made with the addition of flour, as directed in *Gleanings*. These 4, together with some of the pure sugar-bricks, were left over.

Soon after housing these colonies, I introduced to 3 of them 2 pure sugar-bricks each. To the fourth one, 1 pure brick, and one mixed with flour, "to stimulate breeding." We gave it to them to see if bees could eat it safely in confinement. About 6 weeks afterward I took a peep. In each of the 4 hives the bricks were as much as ¼ to ⅓ gone.

In hive No. 4, containing the flour-brick, the bees were all dead, and the bricks, frames, and bees fearfully daubed with dysentery. So far as I can see this is the only colony among my 220 that shows any sign whatever of the disease. I have not taken out these 40 colonies, as I might have done, and given them a flight, for I want to keep them subjected to the same degree of cold and confinement that last winter's weather would have done, in order to put to the test some experiments I am making, even to the risk of possibly losing some of them.

I have just read Mr. Clarke's attack on Professor Cook, with much interest and instruction. I have re-read it, and re-re-read it, and to save my life, I can't see any argument in it. The instruction I gain is this, as near as I can draw correct inferences: First, he "trembles" a little more before Cook, than Heddon; second, that as long as he cries "more proofs," he does not know that he is beaten; third, that he recognizes no answer to his wordy sarcasms, in what I have said in my reply to his attack on the "Pollen Theory." He hands out proof to the Professor, in the line of an assertion on the part of L. C. Root, that certain undefined observations of his and others, proves that bees discharge dry pellets of excreta during winter, but when I told him that I had carefully examined several hundred dysentery-killed colonies, and saw evidence that pollen-eating caused the disease, that did not go down as any evidence. I wonder if the above experiment will convince Mr. Clarke any?

At last he brings forward Dr. Donhoff's analysis of bees' excreta, which goes far to prove that pollen-eating is at the bottom of the mischief, and then exultingly asks, "How does the no-pollen theory square with it?" It squares with it just like this: When so scientific and extensive an observer as Professor Cook has never seen the dry pellets, it argues that if there is such a thing, it is very rarely met with, and that Dr. Donhoff's subject for analysis was dysentery excreta, and his finding the "undigested pollen" in it is just what I should have expected.

WE *vs.* I.—Some in writing use the "we" and "our," while others use "I" and "my." As I am among the former, I will give my reasons when I speak of "our bees," why I do not say "my bees." These bees have been earned by a good woman and myself in a real partnership, if not a legal one. They really belong to my wife and myself together, and the children are really interested in them also. When I speak of "our" packing for winter, I mean my help and myself. "Our" opinion about the best cellar for bees, is the opinion of all of us. I hardly think the more egotistic "I" and "my" sounds any better.

Dowagiac, Mich.

* * *

Translated from Bienenzeitung, by A. R. Kohnke.

Temperature Required in Winter.

DR. DZIERZON.

As in nature in general, so in a bee-hive prevails absolute rest at present. Half asleep they await patiently the time when the morning rays of the sun of approaching spring shall call them again to renew their work. But alas! not every colony will then respond to the roll-call. Many of them have gone to sleep to awake no more. Success depends mainly upon the bee-keeper, whether or not he has done his duty with understanding and care to insure wintering without loss.

Although bee-keepers are agreed as to the most necessary requisites to obtain the desired object, there is still a great diversity of opinion as to the temperature bees require during their winter's rest. One claims, for instance, that a bee-hive should be made in such a manner that the temperature of the interior is never at or below the freezing point, whilst another says he is surprised to find that, though bees are chilled at 9° above freezing outside the hive, they are able to stand a much lower temperature when in the hive. Both are perhaps of the erroneous opinion that the whole interior of a hive is warmed by bees, as a room by a stove.

When the bees cover all the combs, instead of clustering, the temperature in a hive may perhaps be the same in all its parts; but when bees, on account of a low temperature, have clustered in as small a space as possible, they will warm the hive no more than a well covered person lying in bed will warm a room, because in both cases the heat of the warm body is confined to a very limited space. After a protracted cold spell of not more than 6° below freezing, I always found, even in the best protected hives, the combs and walls of the same covered with hoary frost, when even those bees on the outside of the cluster would enjoy a temperature 10° above freezing; otherwise they would certainly have been chilled and died.

To save honey and prevent exhaustion, bees maintain no higher temperature than is absolutely necessary to their existence, but are just as well off if nature or man provides a much higher, as is proven by their well-being and doing in Brazil, where they enjoy a temperature of 30° above freezing during the time of rest. When we have done our day's work and retired to enjoy our night's rest, we do so no matter whether the temperature is 20° above or below the freezing point; bees the same, their rest being entirely independent of degrees of temperature, but dependent on the rest of nature and vegetation. And it makes no difference whether an extraordinary degree of heat or cold causes vegetation to stop growing.

It is, therefore, a mistaken notion to suppose bees must be exposed to a certain degree of cold to winter well. Instinct (which may be called a habit inherited) it is which teaches the bees to abstain from useless flights, because there are no flowers, thus compelling them to absolute rest. During the season from 1833 to 1834 we had no winter in the sense generally accepted; on the coldest day, it being the 6th of January, 1834, we had but 6° R. (18° Fahr. above zero) below freezing. In that same month hazelnut bloomed; in February gooseberries; and bees wintered excellent. So also our last winter (1880 to 1881) was not a very severe one and bees wintered generally quite well. Has a bee-keeper ever found cause to complain of too mild a winter?

It is therefore beyond my comprehension and I find hardly words to express my surprise, to notice that as sensible a man as Dr. Krasicki in his paper the *Bee-Keeper*, published in Poland, ascribes our losses during our late severe winters to an excess of high temperature. For after enumerating the losses of which bee-keepers complained in the different bee-papers, he says: Such are the losses of the German bee-keepers, who follow the advice of their veteran bee-master, who claims that bee-hives can never be made to be too comfortable; bees never generating more heat than is necessary to their well-being. But Dr. Krasicki says: "I prefer 10° of cold to 1° of heat. The bees with which Dr. K. has made his observations must have the nature of a Polar bear, and the Polar region must have been their native country, if his observations and conclusions are correct. Our German bee cannot be classed with such; these winter the better the milder the temperature is during that season, and the better the more they are protected in a severe one.

Bees do not suffer in Syria, Africa, and Brazil from heat, nor do they here in hot summer and mild autumns; and they should be destroyed by being too warm in severe winter? Who can comprehend such inconsistencies? There are only two cases imaginable: 1st, when the whole atmosphere is heated to such a degree that the comb begins to melt and breaks down, which has been reported to be sometimes the case in regions about the Red Sea; 2d, when the entrance of a strong colony is closed without having any other ventilation or opening. In such a case, the temperature in the hive becomes very high in a very short time, so as to break down the comb. Many a bee-keeper, furnishing strong colonies for exhibition at conventions, has found that to be a fact, as also the one who closed the entrance to cause two swarms, which were about to issue at the same time, to fly together, the contents of the closed hive looked like being boiled when opened a short time after. But that with an open entrance, a colony should perish or even suffer, on account of being too warm, I flatly deny, and declare it to be an impossibility. If, for instance, the entrance has been closed during transportation, on opening the same a part of the bees will come forth immediately and commence to ventilate to expel the warm and vitiated air, and in a little while the colony will be quiet again. But if ventilation is of no avail on account of the whole atmosphere having a high temperature, then the bees will leave the hive and cluster outside, which we may observe quite frequently on sultry days in summer; this outside clustering we may even observe in winter, by putting bees in a very warm room. In 1846, when my whole apiary of 60 colonies and many empty hives were destroyed by fire, I had a chance to observe the conduct of bees in a heat which was unbearable to man. They would leave the hive in larger and larger numbers on the approach of the fire and heat to their hives, but clustered quietly on the outside until devoured by the merciless element, by which it appears that bees very well know how to rid themselves of heat in the hive as long as the entrance is open. and are not quite as stupid as Dr. Krasicki wants us to believe.

But does Dr. Krasicki furnish us no proof for his theories? Certainly, but on closer examination they prove too weak to support his cause. Here he mentions a colony in a log gum with a door which had come off, still the bees, though entirely exposed, withstood a very severe winter; there another colony in a hollow tree with a very large entrance had existed for several years. Why, that is nothing extraordinary and proves nothing. I have had similar cases happen to me, and reported them. Just think, the bees clustered in a compact mass in the center of their nest and the combs around them all covered with hoar frost, which, being a very poor conductor of heat, acts as a very good envelope, preventing the escape of heat, like a heavy feather bed. As long as bees can get to honey, they are able to withstand the severest cold weather, may the hive be open or closed. In fact, an open door or large entrance is preferred, as in that case they are supplied with fresh air more readily than by having an air-tight door and a small entrance perhaps nearly closed by frost and snow.

How the interiors of hives look after a protracted cold I had occasion to observe in the winter of 1845. From the beginning of February until Easter, we had the severest winter known for a long time, without any interuption, and I had to take many a heavy and well protected colony into a warm room to save what could be saved. On opening such hives, I found them almost a solid lump of snow and ice, looking more like an ice house than a bee hive. If bees do not winter well in well-protected hives, the cause is certainly not in having had too warm winter quarters, but most likely on account of not having had proper ventilation to carry off the vitiated air and noxious gasses, or for want of water to quench their thirst. As long as the atmosphere is not heated to a degree as high as it attains sometimes about the Red Sea, which is with us no natural phenomenon, excess of it cannot be taken into consideration in our latitudes. It is my conviction that the average temperature which the bees enjoy during their working season, which is from 15° to 20° (66° to 76° Fahr.) is most conducive to their well-being in winter also, as in that case they would perhaps consume less than in severe winter weather, when, to keep up the necessary temperature, they have to consume more honey. To protect them from cold, their worst enemy, should always be our point in view, in doing which we will prevent an excessive consumption of stores, which is certainly to our own as well as their interest.

Karlsmarkt, Germany, Nov. 23, 1881

SELECTIONS FROM OUR LETTER BOX

Increase and Prospects.—I have 25 colonies of bees, and am working 25 more for my neighbors; have examined them and find all doing well, with plenty of sealed honey, and think all will winter safely. I expect to work my home apiary for section honey, as I can find sale for comb honey when I cannot extracted. I have trouble to obtain straight combs without separators; am like Mr. Doolittle, do not like comb foundation in sections, unless I could obtain a better kind than I have had. Last season was a poor one for surplus, but the early part was splendid for building up. I made 11 colonies from 2, which were very weak in the spring, one having no more than 1 quart of bees, besides I reared all my queens from the same two colonies. White clover was a complete failure as to honey, but after the fall rains we had a splendid fall harvest for the bees, but not much surplus. Golden rod yielded, I think, the principal part. We are getting paid back for our drouth last summer, with compound interest, for it rains almost without ceasing. We have had an exceedingly warm winter to date, the thermometer reached as low as 14° above zero on the 24th of January, that being the coldest we have had, while Mr. Doolittle, of New York, writes Jan. 24th, 26° below. What a difference in a few hundred miles. I have 2 acres of melilot or sweet clover, sown last spring, which looks promising. I will report results next fall. I measured one single root, pulled up, which measured 20 inches in length. Drouth surely will not affect it much. White clover looks well and has been green all winter.

A. W. Stith.

Demossville, Ky., Feb. 17. 1882.

Undersized Bees.—On page 92 of the Bee Journal for Feb. 8, there is an item from Mr. Mallory in regard to undersized bees. If I rightly understand the statement, he means that those small bees hatched in 15 days after the brood was given to the colonies. He also states that it was thought a high temperature matured the bees early. Now, it is a plain case that they were not "mature" bees, but forced, imperfect, immature bees, and what were the queens, reared by such an artificial, forcing process, the full sisters of these same lively little workers which lived only a few days? I do not make the sweeping assertion, as others have done, that they are all worthless; but I do most positively say, that the majority of queens so reared will not give satisfaction, and will be short-lived. But scores of bee-keepers are practicing this method of queen-rearing, and sending them broadcast over the country, is it any wonder that the cheap queen business is falling into disrepute. Although we may differ in opinion as to how to produce the best queens, let us be very careful and sure of what we are sending to our customers, and "do unto others as you would have others do unto you," by sending out only such queens as we would be willing to introduce to our own colonies. Jonas Scholl.

Lyons Station, Ind.

A Prospect.—We have had some rain here in the last month, and have hopes of getting honey yet; still the prospect is not very good at my place. The rainfall has been 6¼ inches this winter; 16 inches is our average for this country. G. E. Pleasants.

Anaheim, Cal., Feb. 20, 1882.

Bees in Excellent Condition.—It being warm yesterday, my bees had a good flight. Upon examination, I found that they had brood in a space as large over as my hand. They are in the best condition I ever had them at this season. I think these points are necessary in wintering, viz: a good, fertile queen, plenty of young bees, plenty of sealed honey without much pollen, and to keep them dry.

Thomas Chantry.

Casey, Iowa, Feb. 27, 1882.

Much Food Consumed.—Thus far the winter has been very mild, and bees have a good fly every week or ten days at farthest. They have consumed a good deal of their stores, and many will have to be fed to enable them to see the next honey season. B. G. C.

Trumbull county, O., Feb. 25, 1882.

Wintering Nicely.—Yesterday and to-day our bees had a good flight. Colonies taken up and fed with sugar syrup last fall are wintering with the loss of but few bees, and do not mark the snow with excreta like others with natural stores and plenty of pollen. We lost one nucleus with a pint of bees, having 6 frames. If confined to 2 frames they would probably have survived. W. H. Stout.

Pine Grove, Pa., Feb. 15, 1882.

Bees in Nebraska.—My bees carried in natural pollen on the 14th and 15th inst., which is the earliest I have ever known them to gather pollen in this part of the country. I think they obtained it from the soft maple and the hazelnut; but it turned cold since, and the 20th was about the coldest day of the winter. To-day is nice, but not quite warm enough for my bees to fly. Last spring my bees gathered their first pollen April 17th. I had success in wintering on the summer stand last winter, and my bees appear to be doing all right so far this winter. Which bee, in your judgment, is the best—the Italian or Cyprian? Most of my bees are dark-colored. I have 2 Cyprian colonies. They are bad to sting, but I think are more prolific and better honey-gatherers than the common black bee. P. BOLINGER.
Salem, Neb., Feb. 23, 1882.

[In our judgment, the Italian bee has as many excellent points as the Cyprian. It is possible that an amalgamation of the two races may develop new and desirable traits.—ED.]

Sweet Clover.—I have a fine young orchard, set out last fall, and expect to put two rows of raspberries between the rows of trees, and sow the whole in some kind of honey producing clover. 1. Now, will sweet clover grow so rank that, if I fail to cut it each year, it will be a detriment to the trees by choking them? 2. Does this clover spread? 3. If I wish to eradicate it, would it be hard to do? 4. What amount must I sow to the acre? Please answer through the BEE JOURNAL. Bees in this section doing nicely, though right now they might use overcoats to an advantage.
L. W. WAINWRIGHT.
Noblesville, Ind.

[1. Yes, it would prove a detriment, unless cropped or mown. In rich soil it would grow 5 to 7 feet in height.

2. It would spread in consequence of seeds dropping the second year; but, in the common acceptation of the term, it does not spread, as the roots grow in clumps.

3. No harder than red clover.

4. From 4 to 6 pounds. If drilled, less will be required.—ED.]

Sure Cure for Bee Stings.—I have never seen my cure for bee-stings in the BEE JOURNAL. I charge nothing for the recipe, except to be recognized as its discoverer. It is as follows: Buy from any drug store a small phial of tincture of myrrh, as soon as you are stung apply a little to the puncture, when all pain and swelling ceases instantly. It is also excellent for bites of spiders and poisonous reptiles. I hope all will try it and report result in the JOURNAL. Bees here are in excellent condition. So far, mine are doing finely, with a less quantity of dead bees than I have ever had at this time of year. The coffee sacks over them, I think, are just the things for winter, being warm, and very nice for the evaporation of moisture through them; they are also excellent ventilators to permit the escape of foul air. I have not lost a colony this winter, and all have been flying for the last week.
R. L. AYLOR.
Waterloo, Ky., Feb. 16, 1882.

Metal Rabbets.—Would you advise the use of metal rabbets, where the hives are made to take frames with open top-bars, or would you let the ends of the top-bars rest on the wooden rabbets? G. H. DENMAN.
Pittsford, Mich.

[We would advise the metal rabbets in all cases where the wooden lugs of the top-bars rest on the rabbets. If metal corners are used, then, of course, metal rabbets are unnecessary.—ED.]

My Balance Sheet.—I am not yet so far through the woods that I can halloo much louder than a whisper, yet these bright, sunny February days, and the cheerful hum of the busy bee, inspires me to venture at making my report for 1881, as follows: Put into winter quarters, fall of 1880, 50 colonies, worth, say, $250; bought 1 Barnes saw and freight, $41.52; lumber, $19; 17 dead colonies for combs, etc., $22.10; nails, postage, etc., $25.16; lost 23 colonies in wintering, $115; bee-books and papers, $5.50; total apiary debtor, $478.28. Cr.—58 colonies at date, $290; 13 empty hives, $19.50; 500 frames, $20; fixtures, $10; 1 Barnes saw, $40; 1,623 lbs. comb honey sold at 20c., $324.60; 123 partly filled sections on hand, $12.30; 14½ lbs. wax, $2.90; 32 queens sold for $40; total credit, $759.30; deduct apiary debtor, $478.28, leaving balance for labor of $271.02. This report has nothing to do with my bee-keepers' supply business, which is a separate account. The weather here is very mild, with bright sunshine; the air is full of bees; and all nature wears a smile.
U. E. DODGE.
Fredonia, N. Y., Feb. 15, 1882.

From Kentucky.—I am a constant reader of the BEE JOURNAL, and consider it a boon to bee-keepers who read, think, and act intelligently. There are not a great many bees kept in this (Mason) county, but the business is gradually looking up, and many are adopting the more improved hives, and some the more improved methods of manipulation. Although the winter of 1880-81 was unusually severe for this latitude, bees wintered well, and so far as I have been able to learn not 5 per cent. of loss was sustained. Last season was a poor honey crop owing to the protracted drouth which cut the white clover short. My colonies did not average 50 pounds surplus, and no swarms; in fact the bees here seem to have abandoned the old plan of increasing by swarming for the last three years. I had 7 colonies in the spring, increased to 9, and all are now in excellent condition, on the summer stands, in Langstroth hives, with the upper story filled with coffee sack on frames, and an abundance of old clothes and carpets on top of the sacks. I take the packing out and dry it every warm sunny day. I have not lost a colony for 5 years from wintering.
Minerva, Ky. O. N. WEAVER.

Light Wanted.—I wish all who have any improvements in the form of hives, would let us hear from them through the BEE JOURNAL before we get our hives all complete for the season.

1. The sweet clover seed I bought some time ago I find is all in the hull yet; please tell us how much we should sow per acre when in that state?

2. Will it germinate soon enough in that condition?

3. I expect to sow it in an orchard in the spring with oats. Should I sow anything with it? I intend to let it lay for pasture and hay. I hope it is decided by this time that it is no pernicious weed, as has been stated.

I wish to state for the benefit of those to whom it may not be the most convenient to carry their bees from the cellar to the summer stand for winter flights, or where it is too much shaded so as to prevent them from flying (which is the condition with my summer stands), that I find it unnecessary to carry them to their respective places, but set them in the most convenient place in the sun, and I have not seen a bee light in the place where they are kept in the summer. I have but a few to experiment with, but shall do the same hereafter. Bees are doing well; all have more or less young brood; averaged, per hive, a little over 100 lbs. of extracted honey; selling at 15c. per lb.
H. G. HICKMAN.
Schoolcraft, Mich.

[1. All sweet clover seed we have seen is in the hull. If sown broadcast, 5 to 6 lbs. per acre; if in drills, less will answer.

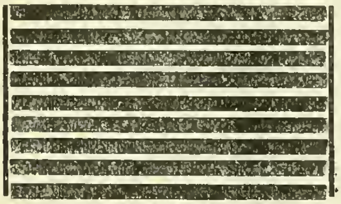
2. Yes; almost as soon as if hulled. The imported Bokhara clover seed, which is virtually the same, is hulled, but we have discovered no difference in its germination.

3. If sown in the spring, you can sow any grain with it you please, and realize a crop of grain, as the sweet clover will not bloom till the succeeding summer. But we would not seed an orchard with it; its growth is too rank and tall to be beneficial to fruit. It is no more a pernicious weed than red clover.—ED.]

Early.—Bees are booming, and gathering honey rapidly. I shall extract some new honey on the first clear, warm day. Some colonies have ripe queen cells and are preparing to swarm; the drones are flying; we have no winter down here.
J. S. TADLOCK.
Luling, Texas. Feb. 25, 1882.

Heddon's Honey-Board.—1. Can you give me any idea or description of the honey-board of "peculiar construction" that Heddon mentions, on page 55 of Bee Journal? In tiering up regular Langstroth hives, we get a space of ¾ inch between the two stories; even where the space is only ⅜, there is some difficulty in handling top frames; bees are very liable to build up the lower combs between the top ones if they chance to hang a little out of place. 2. Should honey kegs be bunged up tight, if honey is kept for a long while? 3. Should they be kept in the honey house, or in cellar, during very hot or cold weather. Last summer I had a half barrel of honey in the cellar—it was closed up tight—one day I examined it, took out the bung, and it was all right; I closed it up again. Half an hour thereafter the bung banged against the ceiling of the cellar, and the honey ran out at the top of the cask. 4. Did the air I let in cause the trouble? there was no gas in the cask when I opened it.
H. W. Funk.
Bloomington, Ill.

[1. Heddon's honey-board of "peculiar construction" consists of strips just the width of the sections to be placed on them. These strips, about ⅜ of an inch thick, are joined by a strip nailed at each end, and to reach the full width of the honey-board.


Heddon's Honey Board.

This honey-board rests on the top of the hive, so as to give ⅜ of an inch between the top-bars of the frames and the bottom of the honey-board. Regular Langstroth hives should only allow ⅜ of an inch between the lower or brood frames and the bottoms of the upper or surplus frames. If more space is given, the bees will invariably bridge them. With hives properly leveled, and accurately made, the frames should never "hang a little out of place."

2. Honey kegs should never be filled to their utmost capacity; for the variations from cold to heat, and *vice versa*, expand and contract the volume of honey, and will produce leakage in any wooden package.

3. The honey should be kept in some dry, cool place—either cellar or honey-house. If thoroughly ripened, keep it bunged tightly; if not, scald it.

4. There was a slight tendency to fermentation, and the admission of fresh air gave it activity.—Ed.]

Moldy Combs.—On the 16th of November I put 6 colonies of bees in my cellar, and to all appearance they have done nicely since then. To-day being fine, I was anxious to examine one; so I took it out, weighed it, and found the loss to be just 3 lbs., or 1 lb. per month. They did not fly much, but acted very much as they do in summer when smoked. The queen was lively, bees very easy to handle, and not a bit cross, though I used no smoke, lots of stores and no dead bees, but I found mold on the lower half of the sealed honey where not covered with bees, giving the part affected a bluish color. Mold caused, I think, by the hive sitting down tight on the bottom board, leaving only the summer entrance open, 3 being left that way; the other 3 are raised up an inch from the bottom board with a sheet and chaff cushions over all of them. Will the bees open the moldy comb when they need it? I intend to examine them all the first fine day. Would it be well to pare off the caps, and would the bees recap it? When bees have plenty of stores, does it stimulate early breeding to feed? I was surprised at the small quantity of honey used. I was particular in weighing. I do not understand your description of U. E. Dodge's feeder—how deep is the box? Why put in cotton cloth bottom? If bees go into the box will they not drown in the feed?
John Yoder.
Springfield, Ont., Feb. 16, 1882.

[Let the moldy combs alone, as the bees will take care of them. Lift out all combs but those actually needed, then add as the queen may need room, and the bees will do all uncapping necessary, and the cleaning. When bees have plenty of honey, there is no object in feeding except to stimulate to brood-rearing; then a thin syrup of honey and water, or honey, sugar and water, is better than a thicker feed. It is impossible to describe Dodge's feeder intelligibly; better send to him for a sample.—Ed.]

A Fair Record.—I commenced last spring with 29 colonies of Italians; increased to 96 by natural swarming; obtained 1,000 lbs. of extracted, and 200 lbs. of comb honey; sold at an average of 15 cents per lb; sold 6 colonies at $10 each, and went into winter quarters with 90 colonies, mostly Italians. They are all right yet. My plan for wintering is to pack in chaff, on summer stands. I prefer this to any way I have yet tried. This has been a very favorable winter for the safe wintering of our little pets. The coldest we have had this winter registered 9° above zero. Brother bee-keepers, let us try and breed our bees up to a higher standard. I know that our bees can be improved by systematic breeding. I think we should breed for the greatest honey gatherers, most hardy, most prolific, and most amiable, all in one.
Van Wert, O. Frank McCoy.

Bees Gathering Pollen.—I put 45 colonies in a cool, dry cellar in December, and in January the weather became so warm that the bees became uneasy, and I carried them out for a fly. I returned them to the cellar in a few days for fear of a cold spell. But there has been no cold weather at all worth mentioning, and for the two weeks last past, the weather has been very warm, and the bees became so uneasy again that I set them out on the 15th of February, and to-day (Feb. 15), it is as warm as May, and the bees are gathering pollen from soft maple and elm. This is unprecedented for this part of the country, and as the queens are laying finely, if we should get a cold spell of three or four weeks' duration, later in the season, will it not prove disastrous to the brood? At about what period is it best for brood rearing to commence actively? My colonies all have plenty of stores of a good quality. I had charge of Mrs. Wirt's apiary last season, and increased from 30 colonies to 74, by natural swarming, and harvested nearly 3,000 pounds of excellent comb honey, which we sold at home for 20 cents per pound. My bees are nearly all Italians and hybrids. The best result in my apiary last season was from hybrids. I am a close student of Professor Cook and read everything in the Bee Journal every week, and to these two sources I am indebted for the pleasure and the profit I derive from my "blessed bees."
J. R. Baker.
Keithsburg, Ill., Feb. 15, 1882.

[Yes; three or four weeks of cold weather would kill most of the brood. Brood-rearing is controlled much by circumstances, and when soft maples and elms are in bloom or furnish natural pollen, it will commence actively. You should, however, reduce the capacity of your brood-chambers to the minimum of frames necessary, and only add to them as they become well filled with brood, in order to prevent disastrous chilling, as the capped brood will do much in keeping up animal heat in the hive.—Ed.]

An Early Start.—The maples are in full bloom here now; I send you a few blossoms. My bees commenced carrying in pollen on the 10th and honey on the 11th, making several pounds of honey during the past week, which continued very warm and pleasant till Saturday afternoon, when it commenced raining, and rained till Monday afternoon; then turned off colder. If the weather had kept warm a few days longer the peach trees here would have been in bloom. On the 12th the thermometer stood 71° in the shade, and 91° in the sun. I commenced with 3 colonies in 1881; now I have 7 all in good condition. I took about 60 pounds of comb honey from them which I sold at 25c. a pound; sold it at home.
Peter Moerlein.
Brussels, Ill., Feb. 22, 1882.

THE AMERICAN BEE JOURNAL

RATES FOR ADVERTISING,

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance :

For **4** weeks		.......**10**	per cent.	discount.
" **8** "		.......**20**	"	"
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Transient Advertisements payable in advance. —Yearly Contracts payable quarterly, in advance.

THOMAS G. NEWMAN,

974 West Madison Street., **Chicago, Ill.**

Special Notices.

The Apiary Register devotes 2 pages to each colony, ruled and printed, and is so arranged that a single glance will give a complete history of the colony.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club :

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

◆

☞ No more reply to Mr. Kohnke, whom I know to have no practical experience with bees. I prefer to let matters rest on their merits.

CHAS. F. MUTH.
Cincinnati, O., March 3, 1882.

◆

☞ The bee-keepers of Anderson county, Ky., have organized a society with J. C. Peden, President, and J. M. Johnson, Secretary. The next meeting will be held at Lawrenceburg, Ky., on the second Monday in March.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., March 6, 1882.

The following are the latest quotations for honey and beeswax received up to this hour :

Quotations of Cash Buyers.

CHICAGO.

HONEY—The market has an upward tendency, and I am now paying the following prices in cash : Light comb honey, in single comb sections, 17@21 cents ; in larger boxes 2c. less. Extracted, 8@10c.
BEESWAX—Prime quality, 18@22c.
AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

HONEY—The retail demand for extracted, in small packages, is fair, but only an occasional barrel is sold for manufacturing purposes. It brings 7@11c. on arrival. Demand for comb honey is only in a retail way, and only choice white is salable. It would bring 20c. on arrival.
BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb, in 1 to 1½ lb. sections, 20@22c.; same in 2 to 3 lb. boxes, 17@20c.; dark and mixed, in 1 to 3 lb. boxes, 12½@15c. Extracted, white, 10@11c.; dark, 9c.
R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—There is a liberal supply of honey here for which trade is very little demand, and prices rule weak and irregular.
We quote as follows: White comb, in small boxes, 18@19c ; dark, in small boxes, 12@14c. Extracted, white, 10@11c.; dark, 7@9c.
BEESWAX.—Prime quality, 21@23c.
THORN & CO., 11 and 13 Devoe avenue.

ST. LOUIS.

HONEY—Strained dull at 8@9c; Comb scarce and firm at 18@23c.—top rate for choice bright in fancy packages.
BEESWAX—Stiff at 20@21c. for prime.
R. C. GREER & CO., 117 N. Main Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.
BEESWAX—Prime quality, 25c.
CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—The market remains unchanged ; 1 and 2 lb. sections, of best white, sell readily at 21@22c.; glassed white, 16@17c.; buckwheat very dull at 15@16c. for unglassed. Extracted, small packages, 12c.; large packages, 11c. per lb.
BEESWAX—Scarce at 25@30c.
A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—January shipments overland were very light, being only 3,630 lbs. from this city. A car load was forwarded from Los Angeles. During the present month a single shipment of a car load of dark comb was forwarded east from San Francisco, Market is at present dull.
We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8¾@10c.; dark and candied, 7@8c. BEESWAX—23@25c.
STEARNS & SMITH, 423 Front Street.

◆

☞ On Feb. 3, Mr. W. J. Andrews, Mayor of Columbia, Tenn., and ex-president of the North American Bee-Keepers' Society, celebrated his silver wedding. It was a brilliant affair.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00 ; or with King's Text-Book, in cloth, for $2.75.

◆

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

OUR ANNUAL CATALOGUE

OF THE

Central New York Apiaries,

Is ready for our customers.

We are Breeding Three Races of Bees.

Comb Foundation,

AND OTHER SUPPLIES.

☞ Send us your address on a postal for our Descriptive Circular. Address,

EDWARD B. BEEBEE,
Oneida, Madison Co., N. Y.

CHAMPION BEE-HIVE MANUFACTORY.

One of the largest manufactories of Apiarian Supplies in the world.

BEE-KEEPERS.

I have made a reduction from 5 to 15 per cent. on all Hives, Section Boxes and Comb Foundation.

The above cut represents my all-in-one-piece section, which is made in thickness according to size. Try one box of these sections, and you will never use any other. Printed directions in every box, showing how to fold them. Last year I could not fill all of my orders for sections, but I have a large stock of them on hand at present. Give me a trial. Send for FREE price list

CHAMPION BEE-HIVE M'F'Y,
Newcomerstown, Tuscarawawas Co , O.
R. L. SHOEMAKER, Proprietor. 10wtf

WANTED—An Experienced Bee-Keeper. Address, stating terms, to M. CENTER, Milton P. O., Ontario, Canada. 10w1tp

Basswood and Catalpa
SEEDLINGS.

One year old, nice Trees, by mail, postpaid, $2.50 per 100 ; by express or freight, $1.50 per 100 ; by express or freight, $9.00 per 1,000. Catalpa equals Basswood for honey, and the wood is proof against decay. Address,
10w4t H. M. MORSE, Nurseryman, Rantoul, Ill.

FOR SALE—A choice lot of BOKHARA CLOVER SEED, newly imported, per lb., 35c.; per bushel, $18. CHAS. F. MUTH, Cincinnati, O.

Local Convention Directory.

1882. *Time and Place of Meeting.*

March 12—Anderson Co., Ky., at Lawrenceburg, Ky.
J. M. Johnson, Sec.

15—New Jersey State, New Brunswick, N. J.

April 1—Barren Co., Ky., at Sinking Spring, Ky.

11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.

19, 20—Tuscarawas and Muskingum Valley, at Coshocton, O.
J. A. Bucklew, Sec., Clarks, O.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May 2, 3—Eastern N. Y. Union, at Cobleskill, N. Y.
C. Quackenbush, Sec., Barnesville, N. Y.

11—Champlain Valley, at Middlebury, Vt.
T. Brookins, Sec., East Shoreham, Vt.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

◆

☞ A meeting of the bee-keepers of New Jersey will be held at Hall No. 22, Albany street, New Brunswick, N. J., March 15, 1882, at 10 a. m., to organize a State Bee-Keepers' Association. All interested are cordially invited. G. W. Thompson, Stelton; C. H. Rue, Manalapan; J. H. M. Cook, Caldwell, Committee on Call.

◆

☞ The Texas State Bee-Keepers' Convention will be held at McKinney, Texas, on Tuesday, April 25, 1882.

◆

☞ The Champlain Valley Bee-Keepers' Association will hold their semi-annual meeting at Middlebury, Vt., May 11, 1882. T. Brookins, *Sec.*

◆

☞ The semi-annual meeting of the Tuscarawas and Muskingum Valley Bee-Keepers' Convention, will be held in the Town Hall at Coshocton, O., on April 19 and 20, commencing at 10 a. m. A cordial invitation is extended to bee-keepers everywhere.
J. A. Bucklew, *Sec.*, Clarks, O.

◆

☞ The Texas State Bee-Keepers' Convention will hold its meeting at Judge W. H. Andrews' Apiary, at McKinney, Texas, April 25, 1882.
Wm. R. Howard, *Sec.*

◆

☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.
G. W. Demaree, *Sec.*
Christiansburg, Ky.

◆

☞ The Barren County Bee-Keepers' Association meets at Sinking Spring school house, three miles west of Glasgow, Ky., on the first Saturday in April, 1882. All bee-keepers of the county are invited.
I. N. Greer, President.

NOW READY, LAKES CIRCULAR
ITALIAN BEES & QUEENS
HIVES, SECTIONS, FEEDERS &C
BALTIMORE
SUNNY SIDE APIARY

65 *ENGRAVINGS*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
974 West Madison Street, CHICAGO, ILL.

1882. JOSEPH D. ENAS, 1882.
(Sunny Side Apiary,)
Pure Italian Queens, Bees, Colonies,
Nuclei, Comb Foundation, etc.,
Address, **Napa, Napa County, Cal.**
9w8t

BEE FARM AND APIARY
FOR SALE.

The undersigned offers his Bee Farm for sale, situated one-half mile from Plainwell, Allegan Co., Mich., containing 7 acres of land, with all kinds of choice fruit, good buildings, including honey house and 2 house-apiaries, with 100 Colonies of Italian and Hybrid Bees. Price, including Bees, $3,000, or $2,500 without bees. For further particulars address the undersigned at Petoskey, Emmett Co., Mich. **WM. E. FORBES.**
10w6t

HEADQUARTERS FOR THE
Golden Italians & Original Albinos,
BEES AND QUEENS.
Send fo Circular. **J. M. C. TAYLOR,**
10wtf Lewistown, Frederick Co., Md.

Italian Bees.

A few Choice Colonies for sale. Address,
H. D. EDWARDS,
10w4t **Delhi, Jersey County, Ill.**

SINGLE MAN WANTED—To take charge of an Apiary. None but a man that understands the business, and is active, need apply.
10w1t H. D. SODEN, Canandaigua, N. Y.

WANTED—A man to help work with Bees, make hives, paint, etc.; also, a good second-hand Gem Planer, cheap. Address,
10w2t D. G. WEBSTER, Blaine, Boone Co., Ill.

GOODRICH'S
FOUNDATION
FASTENER.
A SIMPLE MACHINE
For FASTENING COMB FOUNDATION to the TOP AND ENDS OF BROOD FRAMES, OR IN SECTION BOXES, securely and rapidly. Send for circular. **S. GOODRICH,**
8wtf **Urbana, Ill.**

DODGE'S FEEDER
STILL AHEAD!
Sample by Mail.............................. 30c.
Per dozen, by express.....................$2 00
Catalogue and Price List of Bee-Keepers' Supplies and Small Fruit Plants, free to any address.
8w4t **U. E. DODGE**, Fredonia, N. Y.

1882. - ITALIAN QUEENS. - 1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby Smoker for $1.50. Address all orders to
L. J. DIEHL,
(Money Order Office)—Butler, Dekalb Co., Ind.
8w6m

SEEDS FOR
Honey Plants.

I keep at all times a full supply of Seeds for Honey Plants, including

Melilot Clover,
White Clover.
Alsike Clover.
Mammoth Mignonette, &c.

Send for my catalogue which gives prices and instructions for planting—sent free upon application.

ALFRED H. NEWMAN,
972 West Madison Street, Chicago, Ill.

FLAT - BOTTOM
COMB FOUNDATION,
high side-walls, 4 to 16 square feet to the pound. Circular and samples free.
J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

WANTED—Five or more colonies of Bees in box hives. State kind, number, and lowest price. THOS. S. CHAPMAN, box 134, Lemont, Ill.
9w2tp

130 **COLONIES OF ITALIAN BEES** for sale at $5.00 per colony, in lots to suit; all in good condition, and in Langstroth hives containing 10 frames.
9w3tp **PAUL DUNKEN**, Freeman, Mo.

ELECTROTYPES
Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
974 West Madison Street, **Chicago, Ill.**

GOLD MEDAL Awarded the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self-Preservation;" bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only $1.25 sent by mail; illustrated sample, 6c; send now. Address Peabody Medical Institute or Dr. W. H. PARKER, No. 4 Bulfinch st., Boston. 22w1y
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FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,

1wly Hamilton, Hancock Co. Ill.

GOLDEN ITALIAN QUEENS.

-frame Nucleus, with Tested Queen	$4.50
2-frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1..	2.50
" " per half doz., after July 1	13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,

1wtf Burlington, Iowa.

BEES for SALE.

I have for sale about **300 Colonies** of the

Celebrated Arkansas Brown Bees,

which I will dispose of in lots of TEN COLONIES OR MORE at very reasonable prices. They are in ten-frame Langstroth and box hives. These bees are said to be large, remarkably amiable, good section workers, and excellent comb builders. Owing to the mildness of the Arkansas winter, they will be very strong in bees, and spring dwindling will be avoided. These bees can be delivered on board steamer, near Memphis, before the middle of March, and before the early honey flow and swarming commences. Write soon for bargains, as I will close out both my Southern Apiaries by March 15th, or remove them North.

I am also booking orders for Italian Queens, Nuclei and Colonies, to be supplied from Chicago in June. Address,

ALFRED H. NEWMAN,

972 West Madison St., **CHICAGO, ILL.**

Bees and Queens

FULL COLONIES of ITALIAN BEES,

From my Apiaries.

QUEENS and NUCLEI IN SEASON.

☞Satisfaction guaranteed. Circular on application.

J. H. ROBERTSON,

50wtf Pewamo, Ionia Co., Mich.

J. V. CALDWELL,

CAMBRIDGE, ILL.,

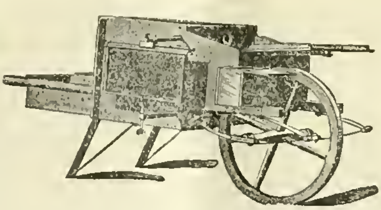
Wants every reader of the good old AMERICAN BEE JOURNAL to send his name and Postoffice address for a copy of his new Illustrated Circular of Bee-Keepers' Supplies. It may pay you to read it before ordering your supplies.

☞Beeswax wanted. 3w26t

PRIZE QUEENS FOR 1882,

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t



DAVIS' PATENT HONEY CARRIAGE,

REVOLVING COMB-HANGER,

Tool Box and Recording Desk Combined.

Carries honey from the hive to the Extractor, a set of apiarian tools, metal-lined drawers for broken combs and fragments of wax, revolving comb-hanger, which holds comb firmly while pruning or cutting out queen cells, writing desk, and wash basin; will not break nor bruise combs; adjusts to fit all sizes of extracting and brood combs, and is less laborious to handle than the ordinary hand-baskets. Write your address on a postal card, and address it to **JOHN M. DAVIS,**

30wly Patentee and Proprietor, Spring Hill, Tenn.

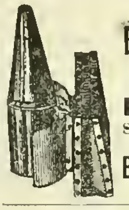
$777 A YEAR and expenses to agents, outfit free, address **P O Vickery Augusta, Maine.** 36wly

EVERY ONE NEEDING ANYTHING

in the line of **Apiarian Supplies**, should send for my Descriptive Circular and Price List. Sent free. Address, **F. A. SNELL,**

3w13tp Milledgeville, Carroll county, Ill.

OVER 20,000 IN USE.



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Send a card for testimonials, or half-dozen rates, to

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HEADQUARTERS FOR

Italian Queens, Bees and Fancy Poultry Eggs.

Send for Circular. **J. F. KIGHT,**

8w6t Poseyville, Ind.

Homes in Tennessee.

The KNOXVILLE TRIBUNE is a medium through which parties coming to Tennessee can obtain information of value in regard to climate, resources, productions, prices of land, and other points of interest to the stranger.

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7w4tx **Knoxville, Tenn.**

WANTED AGENTS to take orders for the best selling book on **FARM** and **HOME** topics ever published. Sells at sight. Ladies can handle it. Has no superior in any language; 1,050 pages, with nearly 2,000 illustrations. Terms free on application. **50 Per Cent. to Agents.**

F. L. HORTON & CO., Pub'rs,

4w5tx **Indianapolis, Ind.**

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1wly **D. S. GIVEN & C.**, Hoopeston, Ill.

THE KANSAS BEE-KEEPER,

Devoted entirely to the best interests of those who keep bees. The question department, conducted by Dr. Wm. R. Howard, is of especial interest to beginners in bee-culture. Jas. Heddon will write a practical article for every number for 1882; 20 pages handsomely gotten up in book form. Every number worth the price of a year's subscription. Sample copies and premium list free to any address. Agents wanted. Address,

SCOVELL & ANDERSON,

28wtf Columbus, Kansas.

FOR SALE—150 Colonies of Italian Bees in improved Quinby hives, in prime condition.

39wly L. C. AXTELL, Roseville, Warren Co., Ill.

The Bee-Keeper's Guide;

OR,

MANUAL OF THE APIARY,

By A. J. COOK,

Of Lansing, Professor of Entomology in the

State Agricultural College of Michigan.

—:o:—

320 Pages; 133 Fine Illustrations.

—:o:—

This is a new edition of Prof. Cook's Manual of the Apiary, enlarged and elegantly illustrated. The first edition of 3,000 copies was exhausted in about 18 months—a sale unprecedented in the annals of bee-culture. This new work has been produced with great care, patient study and persistent research. It comprises a full delineation of the anatomy and physiology of the honey bee, illustrated with many costly wood engravings—the products of the Honey Bee; the races of bees; full desccriptions of honey-producing plants, trees, shrubs, etc., splendidly illustrated—and last, though not least, detailed instructions for the various manipulations necessary in the apiary.

This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

—:o:—

Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—*L'Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—*British Bee Journal.*

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It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Bulletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

—:o:—

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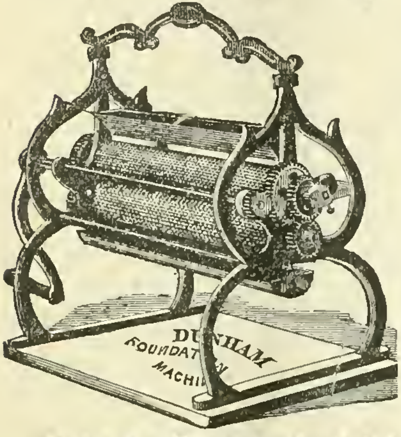

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THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Items.. 161
Bingham's Smoker.. 161
Round Section Boxes...................................... 161
New Price Lists... 161
Present Indications............ 162
One-Piece Sections 162

Among Our Exchanges—

Ekes and Nadirs 162
Spring Dwindling... 162
Healthfulness of Honey................................ 163
Should Fruit-Growers Encourage Bee-Keeping?.......... 163
The Uses of Honey.............. 163

Convention Notes—

Dysentery; Its Causes and Prevention. .. 164
Wintering and Dysentery.............................. 164
Convention Notices...................................... 165

Correspondence—

"To the Law and to the Testimony" 166
The Cows and the Bees.................................. 166
Bacterium and Cause of Dysentery........ 167
Another Call from "Doolittle's Strange Visitor" 167
Various Colors in Bees.................................. 167
Bee Pasturage in Louisiana.......................... 168
Bee-Keeping in Australia...... 168
How to Deal with Ants.................................. 169
High Fence around the Apiary.............. 169

Selections from Our Letter Box—

New Foundation 169
Gathering Pollen 169
Returning Combs with Pollen 169
Forty-six Days Earlier.................................. 169
Prospects Never Better 169
Wants a Queen Early.................................... 169
Ice Attracting Moisture 170
Bees in Maine 170
Does Cold Weather Kill the Bees?....... . 170
How my Bees Wintered 170
Humbug.. 170
A Correction.............. 170
Bee Bacterium 170
Albino Bee.. 170
Remarkably Strong 170
From Oregon.. ... 170
Rye Meal for Bees... 170
Sweet Clover for Texas................................ 171
The Season in California.............................. 171
An Open Winter in Kentucky 171
Cleaning Barrels.. 171
A Difference in Races 171
Bees in Cellar 171
Very Mild Winter.. 171
Preparing for Spring Work.......................... 171
Bees Doing Well 171
Old Fogy Bee-Keepers 172
Prospect Cheerful 172
Location Selected.. 172
Bees and Bloom... 172
Delirious with Joy... 172
Not One Queenless.. 172
Drone Excluders.. 172
Hive Improvements....................................... 172
Good Instruction.. 172

Round Section Boxes.—Mr. G. B. Lewis has sent us a honey rack of Round Section Boxes, made of berry-box material. They are placed in our museum; and we await a trial and report after using them. Mr. Lewis gives the following description:

If these sections are practicable, I claim many advantages over any other, much less work to make them, can get 3 or 4 from the same timber that makes one of the others, weigh only one-third as much, consequently two-thirds less freight. Of course, they are to be shipped in the flat. They can be put together as fast as the dovetailed sections. For these samples we took dry basswood and wet them in cold water and bent them around a frame. Although made of thin material they are much stronger than any other section. They can be thrown into a heap promiscuously and shoveled with a scoop shovel and not brake them. They can be made and sold for $3 per 1,000, with a good profit. It will necessitate changes in honey racks, cases, etc., to use them. But if they are better and cheaper, they will come into use.

* * *

☞ We have received the "Prize List" of the East Northumberland Agricultural Society, with very liberal premiums for bee and honey exhibits. We are sorry to say that there is nothing about it to show in what part of the World it is located. This illustrates the error of not putting the state, province or country upon everything. The "Bay of Quinte" Bee-Keepers' Association issues the List, which is so liberal as to be worthy of much commendation.

* * *

☞ Just as we go to press we learn with regret that Mr. G. M. Doolittle is sick; threatened with brain fever.

Bingham's Smoker.—We have received one of these as they are to be made for the coming season. Mr. Bingham takes considerable pride in his work, and hence everything that he does is *well* done. He constantly improves that important implement—the smoker—in every way that his ingenuity can suggest. He describes the improvements made in this smoker thus:

"While I have not made an absolutely water and mouse-proof smoker, I have made a water-proof valve and corners that will not readily soak out the nails, if it gets wet. Mice will not touch the corners or valve. The joint-lining is waterproof, and will not stretch if it gets wet, nor will the valve wrinkle up. The bellows is absolutely linen-proof, as you will see. All but the smallest size is thus made."

* * *

☞ Mr. James B. Mason, of Mechanic Falls, Maine, sends us a few samples of sections which he obtained of a man in Doon, Ontario, by the name of McKenzie, having seen his advertisement of "hives, section frames, etc., of superior pine lumber" cheap. We are glad to say the advertisement was not in the BEE JOURNAL. Mr. Mason says with freight and duty they cost him DOUBLE the amount advertised, and when received he made a bonfire of them. They are of all lengths and thicknesses, and the roughest that it is possible to imagine. We do not wonder at their being consigned to the flames. That is the only thing they were fit for—but it must have been dear kindling wood. It would be impossible to use them for comb honey; it is but another phase of fraudulent dealing.

* * *

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Present Indications.

Bee-keepers all over the country are now confidently expecting a good crop of honey for the present year. Every indication now points to that result, and we have no doubt but that the yield may yet surprise even the most sanguine with its magnitude. The *Semi-Tropic California* remarks as follows :

> The present outlook is fair for a good honey season ; still the time at which the season can be prognosticated with any degree of certainty has not yet arrived. Our bee-men, however, express more confidence in the promises for the present than they did at this time last year. Nothing but good news reaches us from all bee quarters, and we earnestly hope that this industry will be doubly profitable the coming season.

Colton *Semi-Tropic* gives vent to its enthusiasm in the following item :

> Our bee-men are jubilant and are confident of having heavy yields this season. The bees are reported to be in excellent condition and have stood the winter well. The late rains insure plenty of food, and everything promises we shall have an enormous lot of honey stored during the summer season.

The sagacious bee-keeper will now provide early for the coming honey flow, and be ready with his "tub right side up" to catch all that comes to his door. The sloven, slow-coach, and old fogy will not be ready, and in the fall will make wry faces over their luck, and be all ready for the dismal quarters provided in the prison of "blasted hopes," long before December's wintry storms shall visit the earth.

One-Piece Sections.

On page 140, Mr. Stocking asked what Mr. Forncrook's patent covered. We replied that Mr. F. claimed that it covered all one-piece sections and the machine for their manufacture. Mr. Lewis objects to this and sends a letter containing the following extracts from the Patent Examiner's decision :

> The device in controversy, as will appear from a consideration of the issue defined, is a sectional transversely grooved blank in single piece, having two features which render it available as a honey frame, viz., the longitudinal guide groove for starting the comb, and the side insets for the entrance of the bees. The box blank without these two distinguishing features is admitted old, and is shown by the patent to H. W. Hutchins, cited in the record by the Primary Examiner.

Mr. Lewis also sent us the Patent Office drawings of the Hutchins' box described by the Examiner. This is the same that was mentioned in *Gleanings* for Feb., and quoted by Mr. Byron Walker in the BEE JOURNAL for March 1, page 136.

Mr. Stocking inquired if the Lewis one-piece section was an infringment of the Forncrook patent, and desired its description, which we gave on page 123. We replied that we could not say whether it was an infringement or not. Mr. Lewis now writes us as follows :

> I did not know until your reply to Mr. Stocking that Mr. F. claimed to cover all one-piece sections, and all machines that make them. I supposed he only had reference to making his section and using his machine. Mr. F.'s patent claims and description are perfectly plain and show just what he has. Any section not made like that, is no infringement ; at least so say some of the best Patent Attorneys in the country.

We suppose the matter of infringement is a legal one, and hence we stated that we did not know, when questioned on that point. We answered the queries propounded to the BEE JOURNAL, by stating what was "claimed" by the patentee. The only interest we, or our readers, have in the controversy is to know what is *claimed*, and with this explanation we hope all will be satisfied to leave the matter for time, law, or something else to decide.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Ekes and Nadirs.—In correspondence from Europe, these words are often met with, and as many may not understand them, we give the following explanation from Mr. Pettigrew's "Handy Book on Bees :"

> Can bees be prevented from swarming ? Yes, by the use of ekes ; and what are these ? Additions or enlargements from below—that is to say, eked or lengthened. Hives are eked by riddle rims, or hoops made of four or five rolls of straw of the same description as those in a straw hive, the same width as the hives raised by them. These ekes are fastened to the hives by nails or staples going into both, and the junctions covered with any kind of cement or paste.
>
> But eking hives does not always prevent their bees from swarming ? Not always, but in ninety-nine cases out of a hundred it does. In some hot seasons, and on rare occasions, bees have been known to square the ends of the combs before their hives were quite full, and swarm. This so seldom happens that it may be considered exceptional, and out of the usual run of events. When our hives are timely eked we have never the shadow of a fear that they will send off swarms. When ekes are used cross sticks must be put into them at the highest parts, so that the combs may be fastened.
>
> Nadirs are the opposite of supers. Nadirs go beneath bee hives, and supers above them. If a hive which we wish to keep for stock becomes heavy in July we place a nadir beneath it—that is to say, we lift it off its board, place a hive with cross sticks and a large crown hole on the board, then place the full hive on the empty one, pin the two together, and cement the junction. The bees are soon found hanging in a large cluster like a swarm through the crown hole of the nadir. New combs are speedily built from the upper hive through the crown hole down to the board, and in process of time the nadir is filled with combs and brood, almost all the honey going to the upper story. At the end of the season the top one is taken off for honey, and its bees driven into the bottom hive, which is kept for stock.
>
> Nadirs are most useful for early swarms that become heavy before the end of the season. By placing nadirs beneath them both honey and stock hives may be obtained.
>
> One year our earliest swarm was taken off about the 10th of May. By the end of four weeks it was full, and nearly ready for swarming. Instead of taking off a virgin swarm we placed it on a nadir. At the end of the season we found that it weighed 70 lbs. All the bees were driven below, and the top one taken. It weighed 50 lbs., and the nadir 20 lbs. We thus got nearly 30 lbs. of honey, and a stock hive from a swarm of May. A few pounds of refuse honey were given to the nadir, which was a strong colony in the spring following.

Spring Dwindling.—W. M. Kellogg remarks as follows on this subject in the *Prairie Farmer* :

> The time will soon be here when bees will have to be taken out of the cellar, as generally the weather gets too warm for them to be kept quiet any longer than about the last week in March, though one season I knew it to be as late as April 15. But it is better to keep them in as long as possible without their becoming uneasy, by cooling the cellar or bee-house, or opening doors and windows at night, closing them early in the morning.
>
> Many times we are obliged to carry bees out owing to a continued warm spell of weather, in the middle or latter part of March. This may continue for several days, perhaps a couple of weeks. Maple buds will start, the bees get a little pollen, enough at least to start brood rearing in full vigor, which the bees endeavor

to cover by expanding the cluster. Now comes a cold wave sweeping over the country, very likely bobbing the thermometer down to freezing; the bees have to cluster compactly to keep from chilling to death, and leaving a large share of the new tender brood to perish with cold. All these young bees that should have been saved to keep the old stock strong are lost, leaving the colony in worse condition than if they had started on brood at all, for old bees die very fast in the spring; during the winter they lie dormant and very few die during those months. But when warm weather comes to quicken the bees into active life and work, the old ones drop very fast, and unless young bees are raised to fill their places the colony will dwindle and become weak. Such colonies have to be nursed pretty carefully if they are going to be gotten up strong enough to be of any profit to the bee-keeper during the season, for it is the colonies that are "chock full" of bees when the honey flow comes that are going to get us the best yield of honey.

Most colonies begin to rear brood in the cellar in February, more so than those out of doors, the temperature being more even and higher, making the chances for spring dwindling much stronger than those colonies wintered out doors, which have extended their brood as far as they could keep it warm. The bees in the cellar having had a warmer place, have spread their brood farther accordingly, and when placed on their summer stands are not in fit condition to withstand sudden changes of temperature, like a man who has been housed up for weeks. Hence we see that something ought to be done to help retain heat in the hive. With our common hives made of inch boards it is a good practice in the fall to confine the bees in the center of the hive, giving them well filled sealed frames of comb honey, judging of the amount needed by the number of spaces occupied by the bees on a cool morning; place a division board down each side close to the outside combs, cover the frames with a good quilt of duck or burlap with a stick or two on top of the frames so the bees can go over the top of them, and fill the cap of the hive and down both sides of the division boards with clean, dry oat chaff, or straw if the chaff cannot be had.

If you did not do this last fall, do it now when you take the bees out, and thus save very much if not all of the spring dwindling, and a consequent loss of honey by and by. Very often the hives and combs come out of the cellar quite damp, which is another cause of chilled bees, which the straw packing will absorb and carry off.

Healthfulness of Honey.—The *Texas Agricultural Journal* delivers itself of the following:

"If the people were properly impressed with the facts in regard to the healthfulness, economy and delicious comfort of the daily use of honey, there would be nothing heard of over stocked markets.

Should Fruit-Growers Encourage Bee-Keeping?—Mr. R. Sherfy, at the recent Pennsylvania State Fruit Growers' Association gave a lecture from which we extract the following:

Almost simultaneously with fruit-growing I associated bee-keeping, not, however, without doubt as to its propriety from what I had previously read. Believing, however, that our All-wise Creator made all things for a useful puspose, I at once concluded to investigate the question of fruit and bees. The first fact that we notice is the love the bee has for the nectar and pollen of all kinds of fruit blossoms; its assiduous visits, crawling over stigma and anthers, dipping in here and there for nectar, patting the pollen upon the thighs, passing swiftly from blossom to blossom, carrying pollen from anthers to stigma, and never visiting but one kind of blossoms on the same raid.

Are these assiduous visits intended to benefit the bee, or is it not one of the great designs to bring about fruitfulness? Is not this little insect filling a place for the benefit of man, both in fruitfulness and in the increase of the colony, to assist in gathering a richer harvest in midsummer? We do not claim that the bee is the only agent to assist in fertilization; there are many other agencies. There are two facts that we have noticed, viz: That a bee will never visit an open blossom that has been injured by frost or cold; and that fruit never fails to set well where bees have reaped a rich harvest from the blossoms.

After fruit blooming the bees turn their attention to other fields of pasturage until the fruit matures or rots. Here is where many fruit-growers complain. The cry is "the bees are eating my peaches, plums or grapes," as the case may be, and in one sense they are right. Countless numbers are "diving" into the fruit—and here we investigate. Hale's early peaches are swarming full, fruit not ripe but rotting. Every bee stops short at a rotten spot. Remove every peach that is not sound; the bees run over the balance of the fruit in a wild and apparently frantic manner, then off to another tree they go and alight upon the first defect they find. Early York comes in, fruit sound, no bees about; we pick for distant market; in two or three days some are quite ripe; the bees are feasting upon them; we take off all unsound ones as before, and the bees hunt frantically, never stopping to gnaw or make an entrance, but off to another tree they go. Several years ago, when the new very early varieties of peaches first ripened on my grounds, I had a very decided test with the bees on two early Alexander trees. I took off all apparently defective fruit. The bees had no other resort; they carefully examined every peach left, never stopping except where the skin was broken. Although I had some trouble in saving the fruit of this variety, I failed to detect a bee tear a solid skin. The tenderness of the rind and slight disposition to rot, coupled with the depredations of other insects, were the first causes that gave me trouble with this variety.

Bees have eaten my grapes, but not in every season. Those seasons were not confined to scarcity of bee pasturage, nor the kind of bee, Italian, hybrid, black or German. I observed the same manner of seeking broken places in the skin of the grape as in the peach. I have never yet seen a bee sit sparrow-like upon any kind of fruit and tear a solid rind. I am convinced that ripe fruit, that the bees are so fond of, should have been disposed of in some manner before the rising of that day's sun. Grape skins that bees have emptied of the pulp are nearly all slit from end to end. If the bees slit the grape skins, why do they make a circular entrance into the peach? If they tear the grape, why do they not go at it at once, instead of running frantically over it? I have found when the bees were busy at the grades that most bunches had fermented berries distributed through them, which indicates unsoundness from some cause in the skin of the fruit.

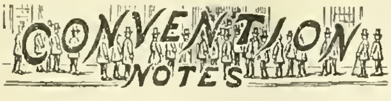
The Uses of Honey.—Mr. C. F. Muth writes as follows to the *Patron's Guide* of Boyd's Station, Ky.

To show to what extent honey is used for manufacturing purposes, my sales during 2 weeks in October, 1881, amounted to 22,000 lbs. Twenty-eight (or 29) barrels (520 lbs. in a bbl.) of it were used for manufacturing purposes, principally by bakers and tobacconists. These latter find quite a profitable sweetening in honey and promise to be great customers for our produce in the very near future.

Our retail trade for table honey was rather slow for the last two months; but our sales by the barrel, to manufacturers, has kept one of our wagons busy most of the time.

Trade changes in all branches of business. And it is interesting to every bee-keeper to notice the change which has taken place in the honey trade. It is not long since when we could hardly convince our customers that the extracted article was pure honey. The next obstacle was its granulation. The granulated honey would be suspicioned and sold for less than honey in its liquid state. This was made use of by eastern and western adulterators; as, viz., the country was overrun with beautiful glass jars filled with glucose (which would not granulate) in the middle of which was a piece of comb honey. These adulterators did and do now a flurishing business, but this branch of their business is entirely used up. Consumers, now, prefer the granulated honey and I saw an article not long since, that glucose manufacturers have almost accomplished making glucose which will granulate. So you see that these infernal adulterators try their best to keep up with honest men.

☞ Articles for publication must be written on a separate piece of paper from items of business.



Read before the Northeastern Convention.

Dysentery, Its Causes, and Prevention.

CHAS. DADANT.

Dr. Angelo Dubini, an eminent physician of Milan, Italy, and learned bee-keeper, contests that the term dysentery be accurate, to designate the disease, which is the subject of this article. In a book, *L'Ape*, published in 1881, he uses the term diarrhea. In fact, if we consult Webster's unabridged dictionary, we find that dysentery means inflammation of the rectum, or colon, attended with griping pains, constant desire to evacuate the bowels, and discharges of mucus and blood; while diarrhea means a morbidly frequent evacuation of the intestines; a relax; a flux.

Such definitions show pertinately that the word diarrhea applies more accurately to the symptoms of this disease, than the term dysentery.

But is really the affection in question a malady? If we give, at evening, to a colony of bees some syrup, made with one or two pounds of honey dissolved in a quart of water, on the following morning, if warm, we will see the bees flying out to void their intestines. They will shed liquid drops all around of a matter as colored as the honey contained in the syrup given the day before, yet we cannot say that these bees have the diarrhea; for this discharge will be natural, although more copious than usual. But this abundance will be the result of the unusual quantity of water absorbed with the honey.

If, instead of diluted honey, such as white honey is in sealed combs, or if we give thick syrup, made with the granulated sugar, it will be impossible on the following morning to notice the least discharge of excremental matter; for the reason that the honey, or the sugar syrup given, being absolutely pure, has left very little, if any, residues in the intestines.

Let us suppose that, in both cases, we shut up the bees, after giving the food. The colony with pure honey will support, without great suffering, a seclusion of a whole week; or if fed with sugar syrup it will suffer even less; while the bees fed with diluted honey will suffer from the first day; and their sufferings will increase every day on account of the overload of their bowels, which is increased by the necessity for the bees to eat a great quantity of a meagre food, in which they can barely find a sufficient support. Then, some bees, unable to stand the overload of their bowels, will perish; while some will regretfully relieve their intestines in besmearing their combs and the other bees.

If we give those bees a chance to fly, during a warm day, those not too much weakened by their sufferings, and which were not soiled by their sisters, will become again lively and active, ready to resume their daily work.

From the above we can truly say that the word malady cannot apply to such a condition. It is an accidental suffering which ceases as soon as the cause disappears.

Now that we know what happens in a colony, in which we have intentionally produced the diarrhea, it is an easy task to find the causes which produce such suffering in the colonies during winter. These causes are multiple.

1. Bad honey. Sometimes the honey gathered in July ferments before winter. Its particles of sugar, on account of their affinity for each other, have united, to form granulations, freeing the water which was combined with them. This water then has fermented and bursted open the cells of the combs. The bees in sucking this honey have suffered by the fermentation and by the large amount of water that they have absorbed, to draw from this water the small quantity of honey that it contained, while the bulk of honey, hardened in the cells, could not be used. Such effect is often seen in linden honey.

Unsealed honey although ripened is also a cause of diarrhea; for, honey being hygrometric, absorbs moisture, sometimes to such an extent as to drop from the cells.

At best honey is unwholesome for winter when it contains too much mellose, or uncrystallizable matter, as honey dew; honey from heath, which is gathered in several countries of Europe, and probably also honey from the very last flowers of the season.

2. A second cause of diarrhea is an insufficient population to warm the hive, then the dampness, generated by bees, is condensed around the group, and besides eating too much honey, this food contains an unusually great quantity of water.

3. A third cause of diarrhea is an excessive and prolongated cold, then the bees, to raise the temperature of their hive, eat more, and overload their bowels with feces. It is for that reason that a colony placed in a cellar, where the temperature is maintained at about 45°, can remain healthy for six months and more.

4. At last a too long seclusion in a place either too cold or too variable; this variation, in the temperature being insufficient to give to the bees the chance of flying outside.

None of the causes that I have described would injure the bees, if they were able to fly out and empty their bowels as soon as they experience the need of it.

To this day, the winter is very mild; our bees can enjoy a good flight every week at least, and we have not yet noticed in our apiary a single drop of the foul matter, which they drip around their hives after a few days of cold weather.

To sum up: To prevent diarrhea, it is necessary to see whether all the honey is sealed; and if the bees are left on their summer stands, they need space according to their number, so as to make them able to warm it. It is necessary to cover the top of the frames with some matter that absorbs moisture; it is also necessary to surround the hive with some straw or other warm material, and after a few weeks of protracted cold when the temperature rises to about 45° in the shade, it is well to awaken the bees by some jarring, so as to compel them to profit by the opportunity which is offered to enjoy a good flight and void their intestines.

If the bees are wintered in a cellar or a special repository, it is as necessary to avoid the rising as the lowering of the temperature far from 45°. If the cellar is too warm open the windows at night, if the nights are cold. If the nights are warmer than 45°, procure some ice and put it in the cellar to melt.

If the temperature is under 45°, shut up all the openings; then, if the colonies are numerous, they will warm the cellar; of course I suppose that the repository is proportionate to the quantity of bees to be wintered in it.

I have never used a stove to warm my bees, and would not like to be compelled to use such an implement.

Hamilton, Ill.

Read before the N. E. Convention.

Wintering and Dysentery.

N. N. BETSINGER.

Mr. President, may it please your honor, Brother Bee-Keepers with both profit and pleasure, be it unto you, to listen for a few moments upon the subject I have chosen, on which to give you the great light, and that light which is just now beginning to draw upon us, is, "How shall we maintain the health and strength of our bees during the long rest in vegetation, here in our northern latitude," on every hand we are informed. "I am done with bee-keeping, the winters are too severe for us."

Thousands have theorized, and a few (seemingly at first) to give a little ray of light, to escape another such a calamity as the most of us the past winter had the misfortune to witness, in which many are, and will be misled with such pet theories.

Not that I think all will fail, for judging from the mildness of this winter thus far, almost any plan will succeed admirably; especially those left on their summer stands, but the great mystery is, why do bees with the same plan of preparing them, winter perfectly one season and the next almost all die entirely?

Some say they have been breeding too much, others say too old bees, or that they ate too much *pollen*, or the honey was poor. Not a few hold if they could fly every six weeks, perfect health would be maintained. Now it has been a great puzzle to me why this diversity of opinion, until of late, I am able to reconcile it all; the plan wintering in nearly every case has been imperfect.

However, as I propose to tell you the main and only cause of *dysentery*, I will not dwell long on repeated theories. I know some of you are already beginning to smile and are saying within yourselves, another theory is to be added to our list. But I say unto you, I shall do what has never yet been done to this subject, and that is, prove every statement I make upon this question.

First, let me enquire, is there any one present who can detect (if any) the difference between honey gathered in 1879 and that of 1880, both being from the same kind of flowers, if not, be it then conceded, there *is no* difference, no matter what season it is gathered, and to the bee, when properly sealed, honey is honey, and no worker bee during her life, can consume more than seven grains thereof. The calculation is that a swarm of bees will average in November, not far from 15,000 bees, none of which will survive after consuming about 15 lbs. of honey. The quantity of honey taken into a bee's stomach at any one time, is very minute, and that of pollen, is much less, both of which are only consumed to supply the body with heat, while the cluster is in its semi-dormant state. A farmer houses his stock to save feed, but not so with the bee-keeper, for he is obliged to give his bees protection in order to save life, and when the conditions of the latter are perfect, the object of the former is obtained, but where such is insufficient, the bees find it necessary to consume food to prevent the cluster from becoming entirely dormant, the stomach in such cases is used as an organ for generating heat, and the body must sooner or later fall a victim to dysentery. I claim (and shall give positive proof) where the atmosphere is congenial to the cluster, and they have access to and full control of the entrance of the hive, that under no circumstances whatever, will they discharge their excrement in a liquid state.

Well may you ask whose apiary is free from this most dreaded disease, which is brought about only by over-consumption of honey and pollen, chiefly the former. Let us reason together, therefore, and see if the position I have taken is correct.

The standard amount of honey for a colony on which to winter, if I mistake not, is about 25 lbs., and in poor seasons, when the extractor is used exclusively, a large amount of our bees are allowed to go into winter quarters, with not to exceed 15 lbs., and in nearly every instance, when such is consumed before the first of April, it has been supposed by many they died of dysentery, caused by starvation, which I consider perfectly absurd, for did they not consume their allotted amount. Was it not then their time to die? Still we find bees dying with dysentery, leaving from 1 to 15 lbs., yes, apparently *all* of their honey, how is it, with such, is it not true, with you men of experience, when hives are filled solid with sealed combs, that the space between them, is greatly contracted, often caused by the superseding of queens, late in the season, thus diminishing the quantity of bees in each space, though it may have the appearance of a good colony, while the fact is the reverse. Why then should they consume much honey, for they seldom survive the first half of the winter, but we often see when they are wintered on their summer stands, and are privileged with frequent flights, they come out in the spring with plenty of bees, and apparently in a good condition, with nearly all their honey consumed, and while they have a large amount of brood, a portion of which is hatching daily, it is after the expiration of several weeks before there seems to be an increase to the size of the colony, and in many instances, the colony, though strong in numbers when they take their first flight in March or April, they become, before the first of May, entirely depopulated, (commonly called spring dwindling), and often leaving quite a large quantity of brood. This excessive loss heretofore from supposition, has been said to be old bees, which I shall positively contradict; for how can bees be old, who have not seen but a few days, and many, on which the light of the sun has never shone; is it not a fact that these bees from the excessive amount of labor devolved upon them in nursing the brood, shortened their lives by an over-consumption of food. Although it was accomplished in a few days, for I affirm, that each bee had consumed the portion of honey allotted to her, and a bee is not old until it has seen at least seven months, and while in a semi-dormant state, where the atmosphere is congenial to them, not being obliged to take food to produce animal heat, they have often been known to survive much longer, and that too, without a cleansing flight. Again might we ask, how is it with the queen, does she fly for this purpose? No, no, would be the general response. But how oft do we hear the complaint after a long and severe winter, and the first few sunny days in spring, my bees are swarming out, and what is the trouble. Has not their numbers, during such a winter, been so greatly reduced that the queen, like all true hearted mothers, willing to share the same fate with her own; have also taken an over-supply of food, to assist in maintaining the necessary heat, improves the first opportunity to exude her distended body, and in order that we may save them, two or more such small swarms are united in one hive, and the surplus queens introduced to queenless colonies, or fill some early order for dollar queens, most of which you all well know will not survive but a few weeks at the longest; and what is true with the queen, is equally so with the whole colony, which is positive proof bees do die from an over-consumption of food in a less given time than is due them, compelling them to discharge their excrements in a liquid state; thus the cause of dysentery. And the true and only prevention of this most dreaded disease is: First, a good cellar or house of some kind, so that the air can, if necessary, be changed every two hours, in order that the interior may be free from the smell of bees.

Second, perfect quietness.

Third, the atmosphere outside the cluster, should not fall much below 60° F., and with these conditions the excrements will be discharged in dry state, and a colony of six spaces will not consume more than 1½ lbs. per month. They may also be confined to the repository at least six months, with a loss less than one per cent. As I purpose to show to you a few samples of excrements which I have with me, not only for the benefit of those who already believe, but that I may convince the most skeptical, the position I have taken. I must close by these remarks.

Our elder brother. M. Quinby, the father of this new doctrine, has finished his work, and has gone to his long rest, though his body now sleeps in our mother earth, he is not dead, he still lives. The seed he has sown has germinated, and is taking root, out of which I am able to say Eureka. Although your humble servant, who is now addressing you, was one of the first to ridicule this doctrine, not from prejudice, however, but for the reason of the dense cloud, that this light once shone through so dimly. However, it is human to err, and to repent is wisdom, and who is it that desireth not knowledge, for God said, "to him that asketh it shall be given; so be of good cheer my brother, and be not sad over the late mortality among your bees, for out of it has grown a great light, such as has never appeared unto us until this day.

Marcellus, N. Y.

* * *

☞A meeting of the bee-keepers of Franklin county, Ind., will be held at the court house in Brookville, on Saturday, March 25, 1882, at 10 a. m., to organize a County Association. All interested in apiculture are cordially invited to attend. J. W. Sturwold, S. S. Herrel, and Henry Kimble, committee on call.

* * *

☞The Champlain Valley Bee-Keepers' Association will hold their semi-annual meeting at Middlebury, Vt., May 11, 1882. T. BROOKINS, *Sec.*

* * *

☞The semi-annual meeting of the Tuscarawas and Muskingum Valley Bee-Keepers' Convention, will be held in the Town Hall at Coshocton, O., on April 19 and 20, commencing at 10 a. m. A cordial invitation is extended to bee-keepers everywhere.

J. A. BUCKLEW, *Sec.*, Clarks, O.

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☞The Texas State Bee-Keepers' Convention will hold its meeting at Judge W. H. Andrews' Apiary, at McKinney, Texas, April 25, 1882.

WM. R. HOWARD, *Sec.*

* * *

☞The Barren County Bee-Keepers' Association meets at Sinking Spring school house, three miles west of Glasgow, Ky., on the first Saturday in April, 1882. All bee-keepers of the county are invited.

I. N. GREER, President.

CORRESPONDENCE

For the American Bee Journal.

"To the Law and to the Testimony."

G. W. DEMAREE.

When I was penning those remarks concerning Mr. Heddon's private letter to Mr. Dadant, which the latter gentleman published as a part of his reply to my article, I did not have the remotest idea that I was getting into a controversy with Mr. Heddon, the old war horse with his "dread bolted thunder." By taking a glance at page 105 of the present volume of the BEE JOURNAL the reader will not fail to see the whole thing in a nut shell. Mr. Dadant, after crediting me with language that I never used, viz: That "the Cyprian race is gentle and peaceable," politely and gracefully retires. Mr. Heddon then rushes into the field of battle, brandishing his "little pen," which is doubtless "more powerful than the sword."

Really, I thought that I spoke very mildly and gently concerning Mr. H.'s opinion, but it would seem that he is unwilling to reason. I only intended to say that he did not help Mr. Dadant so far as the main issue between us was concerned, i. e., the question of purity of blood of the Italian race. I have as much respect for Mr. Dadant as Mr. Heddon has. That he has been before the public as an importer and dealer in bees, etc., for nearly a score of years without any complaints concerning his manner of treating his customers is a better endorsement than any amount of "word praise" that Mr. H. or myself could give. The only wonder is that a man of his experience should be slow to learn that the imported Italian is a hybrid. It is not so surprising, however, that a person holding such views as those propagated of late by Mr. Heddon, should be found in darkness.

It is well to warn Mr. Heddon that hundreds of intelligent bee-keepers all over this great country will move forward in their careful experimenting with, and breeding up the races of bees to the highest point of excellence, regardless of his opposition. It will be concluded, I think, that bee-keepers, by their careful experimenting with, and breeding the Italian from selected specimens, have removed the scales from the eyes of the "bee as is a bee" sort of bee-keepers, of whom Mr. H. is chief, and caused them to see that the imported bees are hybrid in character, and therefore capable of being bred up to most any type to suit the fancy of the apiarist. These "pure blood" scientists, however, are not the men to jog along behind, the light having once flashed upon their pathway, they will soon be in the lead, shouting "I told you so." Mr. Heddon has already paved the way by intimating that he was aware long ago that his long dark Italians were spiced with a "dash of black blood." Mr. H. should not talk so, having undertaken to help Mr. Dadant, who was grieved because I said that his dark imported bees were hybrids, (and he really thought that I had added that they were "ferocious," but I did not use that terrible expression, except in a playful way) and he obtained those "dark" bees from a certain dealer who obtained them from Mr. Dadant. Now for him to say that those "long, leather colored bees" have a "dash of black blood," is hard on his client.

Mr. Heddon brings forward two witnesses to prove that the "golden Italians of the period" have no working qualities. These witnesses are unknown to the bee-keeping fraternity, who must be the jury in this case. Such testimony as he offers in proof of his proposition would be rejected in any cross road police court. That somebody told him that somebody told him that "Aunt Hanna had said," why, the lawyers would stop you before you could say all of that, no matter how lively you might speak.

Of course it would be asking considerable of me to say just why the golden Italians of the two unknown witnesses failed to gather surplus stores right where hybrids were storing a "perfectly enormous" yield of surplus. I was not there to examine for the causes which may have been present. Having no diagnosis from which to reason, I can only surmise, in view of the fact that the yellow bees, belonging to other people can work, and do work efficiently, that there was something wrong with those bees; perhaps the bungling bee-keepers may have "tinkered" with them just at the right time to destroy their usefulness for the season. It does not take much of a blunder to do this sometimes, as most of us have learned by experience.

Mr. Heddon has failed to make a *prima facie* case, upon the evidence of those two unknown witnesses, even though we should admit the validity of the testimony endorsed by so good a bee-keeper as Mr. Heddon. But as he demands it I will introduce a few "live" witnesses for his special benefit and edification.

All admit that Mr. G. M. Doolittle makes large reports from year to year. He gets his large yields of honey by breeding from queens whose progeny show the 3 bands while standing on the combs. Mr. O. O. Poppleton, of Iowa, reported at the National Convention, at Lexington, Ky., that he had obtained 14,725 lbs of surplus from 108 colonies during the past season. This being a good yield, I asked him publicly what strain of bees he worked to get it, his answer was "Light Italians." It will be admitted that Mr. D. A. Jones handles some honey every season. He keeps none but yellow bees. Mr. Heddon called out Mr. W. J. Davis as a witness in favor of dark bees, and that gentleman testified in favor of the yellow bees. These witnesses need no vouching for, and they could be multiplied to any reasonable extent if necessary. I am now willing to submit the case upon the evidence without further delay.

Until Mr. Heddon brings forward some proof that bees can gather a large yield of honey in a location where nature has provided but little nector, or to show that bees can gather honey where there is none to be gathered, I can rest easy by repeating the self evident fact that a good location is essential to a large yield of surplus.

Christiansburg, Ky.

* * *

For the American Bee Journal.

The Cows and Bees.

J. H. MARTIN.

For the benefit of Mr. Reynolds and any others interested, I will give my experience in conducting a dairy in connection with an apiary.

I find that the cows and the bees are the best of friends, and I fail to observe that nutriment is taken from our clovers; on the contrary, the bees perpetuate the clover for the cows. I have heretofore heard farmers complain that bees must take much nutriment from pasture lands. Now let us see if the charge is well founded.

Our pasture lands are first seeded to red clover, and other grasses, and, after a year or more, white clover and various wild grasses come in spontaneously.

The first season, red clover completely covers the ground, and the field is red with bloom. If we now turn our cows into this splendid feed, we find that the blossoms, although abundant and rich with honey, are discarded for the luxuriant and rich foliage, and the blossoms are trampled ruthlessly under foot. The superior richness of clover, then, comes from its foliage. This is still more evident from the fact that in all dairy regions, white clover comes in very abundantly, while with the pasturage of sheep, the white clover is nearly all killed out, from the fact that sheep feed upon the blossoms and prevent the maturing of seed, while the cow feeds only upon the foliage, allowing our dairy lands to become white with the tiny blossoms and consequent production of seed. The honey being in the blossom I fail to see how it will affect the nourishment of cattle when they do not eat it.

The effect of the blossom upon mutton, I think would be very slight, if at all appreciable, for our best mutton is raised upon pastures with a variety of grasses and a rich soil.

I would further state a well known fact, that our richest milk is obtained in the fall months. At this time the dairyman turns his cows upon his meadows covered with a thick growth of aftermath. In this there is seldom found white clover. It is constituted of various grasses of a tame and wild nature, having no blossoms and no honey. Still it has a superior richness.

The foregoing is the result of my observations in this locality. I find here a beautiful law of nature, a natural aid of two greatly different races of God's beings. The cows spare the blossoms for the bees, and the bees fertilize them that they may bring forth seeds and perpetuate the foliage of the plant for the nourishment of the cows.

Even our ancient progenitors, in Bible times, understood this law much better than do many at the present day, for the promised land "flowed with milk and honey," as one of its chief characteristics. The cow and the bee were not antagonistic in the Holy Land, why should they be here now in our land.

If I were to locate an apiary for white clover I would put my bees in a rich dairy region. Our most successful eastern apiaries are thus located. L. C. Root & Bro.'s, and G. M. Doolittle's great yields of honey are obtained in one of the richest dairy regions in the country; still the butter and cheese from that region command the highest market price.

I would also prefer locating a dairy in a region where many bees are kept for the many advantages that would accrue to the benefit of the dairy. For the highest success of either of these industries, I am positive they should be conducted in the same locality.

Hartford, N. Y.

For the American Bee Journal.

Bacterium the Cause of Dysentery.

CHAS. F. MUTH.

I just noticed "bacterium" in No. 8, page 122, of the BEE JOURNAL, which, perhaps, allows of a few suggestions. Doctor Southwick says, very properly, as follows: "Bacteria do not work much below temperate, and not at all below freezing. They work better the hotter it is, until it gets hot enough to destroy vegetable life. Let us compare this with bee dysentery. Bees are most apt to have the dysentery in long spells of severe, cold weather, when the bees are quiet and the hive at its lowest temperature, at a time when bacteria work but little if any," etc.

Let me suggest, right here, that this is the very point where bees try their utmost to create all the heat they are able to. All that is needed yet is insufficient ventilation, and you have the very hot-bed of bacteria. Water stands and hangs in big drops on the combs, walls and under the covering; this, aided by the great heat created by the bees, turns the honey about their cluster sour, and as the bees gradually die off by dysentery, and the heat diminishes, mold commences to cover the combs and keeps growing thicker as long as there are bees enough left to keep up the necessary temperature.

Mr. Heddon wrote one of the best articles on wintering (in *Gleanings*, I believe) I have seen for some time at the conclusion of which he states that bees are safest when the inside of their hive is kept dry. This can only be done by a proper upward ventilation. My covering of the brood chamber is a straw mat. Last fall I bored a 1¼ inch hole through each side of the upper story, near the top, and my bees never looked drier and healthier than they do now, and I have never found less dead bees in the bottom of the hives. I had, accidentally, skipped two hives and forgot to bore those ventilating holes through the upper stories on which the covers were resting tight. These two are the only hives with moldy combs. The bees are in good condition, because our winter was a mild one, and they were not obliged to create a heat as they would have done if the winter had been as severe as last winter. Otherwise, heat and dampness would have brought bacteria, and those two colonies would very likely have died of dysentery.

Cincinnati, O.

For the American Bee Journal.

Another Call from "Strange Visitor."

L. W. VAN KIRK.

I am still living, Mr. Doolittle, having passed through the "ordeal," but not without incurring some of the ulterior penalties which are so common when one tramples on the corns of a "specialist." I have followed your writings for years, and somewhere in the "lumber room" of my memory I have stored a few thoughts that I cannot pass without an explanation. You say "if we wish a good yield of box honey, use so few frames in the hive that the queen keeps them literally full of brood," and in your report for 1880 you say: "June 18th found us feeding to keep from starving, and on July 13th basswood closed, after which our bees hardly obtained a living." Here is what I don't understand: If your queens keep the brood chamber literally full of brood during the honey season, where does their winter stores come from? If June 18th found you feeding bees to keep them from starving, and the season closed July 13th, your bees must have been short of stores in the brood chamber, if you kept the queens laying right along. Again, if your queens kept the brood chamber literally full of brood, from whence cometh those frames of sealed honey that you speak of converting into brood in the spring? Have you another apiary to work for the one from which you report?

As you were free to give the readers of the JOURNAL what you learned from the "chat," perhaps I may have the same privilege. "Mine host," in his report for 1881, says: "One thing we noticed with pleasure, our colonies gave nearly an equal yield per colony," and adds, "this is what I have been breeding for during the past few years. Reader, if you wish to obtain nearly an equal yield per hive, unite till you get all strong, take frames of brood from the strong and give to the weak, mix them up thoroughly, give them an even start and keep them that way, as nearly as possible, and you will get nearly an equal yield per hive. Then attribute the result to your skill in breeding and not manipulations. Again, bee-keeping to be most profitable should become a speciality, and the culture of small fruits, etc., a side issue. You must arise and proclaim to the bee-keeping fraternity that you have bred a superior strain of bees, and that you don't raise cheap queens, etc., and when you find that "this stand don't sell all the cakes," come down to dollar queens and grades.

In a word, get all you can out of your bees, then let them nearly all die in the winter, and say they just died and you can't tell why. Your loss will help to balance your big report and show that none but a "specialist" need try to make bee-keeping pay.

Washington, Pa.

For the American Bee Journal.

Various Colors in Bees.

S. A. SHUCK.

Of all that has been written in favor of fine color in bees, I have not seen any reason, save for the sake of beauty (if that is a reason), given in favor of the golden stripes.

It seems to me that some in their eagerness, have forgotten that it is facts and argument, that is required to settle this controversy. If we have no reasons to give, let us give up the battle.

Bees, like all nature, animate or inanimate, must have color, and if the beautiful can be as useful as that not so beautiful, I beg the privilege of taking my choice; if not, give me that which is most useful. Color belongs to everything, and many things are known by their color. How could we tell whether our bees were Italian, German, or Hybrid, if it were not for color?

The various races of people are as peculiar in color, as in language or form. Certain colors belong to certain classes of animals, fowls, and insects. Who ever saw a red horse? And of all animals, who ever saw a golden colored one?

Among the feathery tribes we find all colors, but this yellow color is not as common as many others. But of insects, who has not seen yellow in all its various shades. If we find that this golden color is common in insects, or anything, is there any quality, trait of character, or disposition attributable to this color, that should make us fear or condemn its possessor?

Of the different races of bees in all parts of the world, those possessing yellow bands are the most common, (judging from what I can gather from books and journals). If this be true, and if the Italian bees have proven their superiority (who will deny it), as a race, over any black bees known, will some of the friends, who are insisting so strongly for dark or leather-colored bees, please show us wherein, or how, these golden bands interfere with the various traits of character of these industrious little creatures?

I am willing to admit that I believe that many apiarists have made serious mistakes while breeding for color. But I do not believe the mistake to be in the color, but the oversight or neglect of other qualities. The testimony of thousands of bee-keepers from all parts of the country, concerning the better qualities of the two races, stands more than ten to one in favor of that possessing the yellow bands.

Judging from this and the experience of those engaged in the production of fine stock, horses, cattle, hogs, sheep, and poultry of all descriptions, it is reasonable to expect a greater improvement by breeding the best of the superior race, rather than that of the inferior. Nor does it look reasonable that the superior can be improved by the inferior.

Bryant, Ill.

For the American Bee Journal.

Bee-Pasturage in Louisiana.

EDWARD NOTLEE.

Wintering bees, and the almost endless variety of life-saving apparatus, is of no interest or value whatever down South, as there is nothing of the sort required here. As to your vast array of honey-producing plants, trees and flowers, we have almost nothing of the same kind here, we have plenty of clover, but it is worth nothing for honey, the hot weather is said to make it too dry. Strange to say, we have no honey-producing material to any great extent for white marketable honey near New Orleans; only from the maple, in February, and the abundant willow, which continue to bloom for 6 weeks from the first of March to the middle of April. All honey made after that is too dark for the market. But this grand blooming willow we have in splendid abundance. And the bushes, which are not very high generally, and the luxurious feathery bloom in its drooping beauty, with the busy bees on them, are seen to great advantage. Mr. Grabbe says the Louisiana willow is far superior to any willow in your Northern or Western States. There are a variety of species here which continue to bloom in fine rotation in the most splendid order for bee accommodation, although this willow honey comes early, and is white and beautiful to look at, but I regret to say it is not in taste and quality equal to very much which your bees produce in the Western States. It has a very perceptible willow bitter, and consequently will never be a choice article of much demand here. But Louisiana can well boast of her sugar-growing capacity. Those who do not know enough of bee management to have their bees strong and rushing by the first of March, in Louisiana, will never make a fortune in this line, or enough to pay off the national debt. If we could produce anything equal to your Spanish needle honey it would be in great demand, and very generally used. Mr. Perrine's bees supplied us some fine specimens of this rare quality when they returned from their celebrated trip of "floating apiary" renown.

In the long ago when I first changed my bees from the old box to frames, and could examine their condition, generally in October there would not be more than 3 or 4 lbs. of honey to the colony and sometimes less; for one or two years I was greatly afraid they would starve, but by the middle of December they had always gathered plenty for winter. I suppose they get this late supply from the large amount of sugar everywhere coming in by rail and boat. I found Mr. Perrine's bees in the same condition in October, two years ago, and wrote to him about it; he sent a large quantity of honey from Chicago to feed them.

With the lights of the past and after twenty years experience here, I find that Louisiana, as a rule, produces an almost illimitable amount of willow honey during March and April; from June the yield is much less in quantity and quality up to August, and then almost nothing on to November. But in the next six weeks, to the middle of December, they never fail in gathering a full supply for winter. I have found a large quantity of honey even in October, but this is a rare exception, and does not happen oftener than one year in five.

New Orleans, La.

For the American Bee Journal.

Bee-Keeping in Australia.

S. MACDONNELL.

Since the advent of the Italian bees imported by me last July from Mr. A. H. Newman, of Chicago, I have been devoting my attention to queen rearing, expecting that this season, owing to the prevalence of black drones, I should get my queens cross-fertilized and that next year I should have none but Italian drones about my hives, which condition, combined with the absence of other bees in the vicinity, would give me a fair chance of having a second batch of queens from my imported stock purely fertilized, or rather, a certainty of having them purely fertilized if they met the drone offspring of their elder sisters. The interesting Dzierzon theory, which most bee-keepers have accepted as infallible, was, of course, the standard to which I attached my programme, on the good faith of the wide reception of the theory and the recommendation by the American bee papers of the course planned for my operations. In the AMERICAN BEE JOURNAL, 1881, page 299, I find that Dr. Tinker has the temerity to attempt to undermine one of my household gods, the Dzierzon theory, as he holds that an Italian queen impregnated by a black drone does produce other than pure Italian drones. Dr. Tinker handles the matter in hand so well, and shows such clear insight and observation, that I fear a very troublesome antagonist has entered the arena, and if he substantiates his case, many who have depended on the drone progeny of an Italian queen, fertilized by a black drone, for rearing pure Italians, will have necessity for a great deal of faith to eliminate the black blood from their stock. Although I might have sufficient faith to counteract the black blood in one or two colonies, it certainly would fall short for twenty colonies, and when the time comes on for rearing a second batch of queens, I shall take pains to have them fertilized by drones from my imported stock, and shall risk the evils attending in-and-in breeding. I may here mention that the one experiment of pure impregnation which I tried resulted successfully. The process was a modification given in the *British Bee Journal*, of the Kohler process. It consists virtually in securing the entire population in the hives containing the virgin queens and the selected drones and in letting the inmates have a fly as soon as the drones in other hives have gone to roost. For this experiment the Langstroth hive, with portico is useful, as a frame covered with wire netting can easily be attached to the portico, providing adequate ventilation and yet confining the bees.

In my last report I noted that a German bee-farmer had arrived here to establish the industry of bee-farming. At that time I saw but little chance of his obtaining an opening, on account of the serious total of the expenditure necessary. I was, however, very loth to lose the services of a bee-keeper who had matriculated under the late Dathe, and on representing the matter to a few friends, I found no difficulty in forming a company of six, each subscribing £75, to give bee culture on a commercial scale a trial in this winterless land. Our capital £450 ($2,250), under the management of Mr. Abram, the German referred to, and who is one of the capitalists, will enable us to operate on a sufficiently large scale to give the venture a fair test. Our company is styled "The Italian Bee Company." I shall report our doings from time to time. This company, for the present will supersede the Langstroth farm mentioned in my last.

While Italianizing, two of my young impregnated queens flew from the frames, on examination of hives. At the time that one flew a small swarm of bees was in the air, and in due course they settled on a vine close to the hives. Mr. Abram, who was assisting me at the time, or rather, who was doing all the work while I looked on, pointed to a small ball of bees at the foot of the vine, and in the midst of the ball we found our truant queen uninjured. The other queen did not return and had to be replaced.

A gentleman in Sydney received from California a colony of Italian bees. As soon as I heard thereof I placed myself in communication with the owner and inspected his bees. I found them in an American hive (square frames) literally crammed full of comb and bees, an immense swarm with a splendid queen. The frames had been misplaced and the comb generally was in very bad order. The hive was so full of bees that there was no alternative but to swarm. I transferred them, comb included, to a double story Langstroth hive, and ultimately divided them, setting my friend, who has now a strong attack of the bee-fever, on the road to rear a queen, in which he has succeeded, and he is consequently well pleased.

Sydney, Australia, Jan. 19, 1882.

For the American Bee Journal.

How to Deal With Ants.

DR. G. L. TINKER.

The small reddish ants that may be found almost anywhere burrowing in the ground, are a very troublesome pest to the bees. Although they do little real mischief in warm weather they are great depredators of the hives in cool weather when the bees cannot fly, forming long lines from their nests to the hives with every returning ant filled with honey.

Two years since I noticed on a warm April day a great ado among the ants. In fact the ant queens were all coming out of their holes for a wedding flight. They were about ⅜ inch long, some with, and some without wings. They were reddish like the worker ants and flew about rather clumsily. The ant drones which had preceded the queens in coming out were small blackish winged ants and inclined to gather over little grassy plats about 3 feet from the ground where the air would be swarming with them.

Finding the queens mating with the drones after the usual fashion of insects, it occurred to me if I would kill them the annihilation would be about as effectual as to destroy the queens of the hive bees. I got a hoe and began to dig into a nest and found that but few had yet come out and the greater number were being nursed and made ready by the workers within two or three inches of the surface. As the nests were easy to find I had in the course of two hours killed a great many hundred of them. Some nests had only a few and some over 50 queens.

The ant nuisance was immediately abated and there were few to be seen about the hives the following summer. Last spring I found only a few nests and treated them with like results. Two or three boys might easily clear out the ants from an acre of ground in one afternoon, as the ant queens only come out from 12 m. to 4 p. m.

Two years ago the queens came out about the 1st of April, but last spring not until the middle of April. They may be looked for after the first two or three days of hot sunshine to warm up the soil in the early part of April. The first indication of the queens coming out will be the little clouds of swarming drones.

New Philadelphia, O.

For the American Bee Journal.

High Fence Around the Apiary.

WM. C. CASSON.

I have been very much interested in Mr. Heddon's articles on extracted honey until he came to that high board fence, to surround the apiary, and if Mr. Heddon will bear criticising I shall object to that, and will give my reasons why. It is a hindrance to the loaded bee on returning home.

When the bees emerge from the hive and go in search of honey, they will find no trouble in scaling that high fence. But in the middle of a warm day, in cloudy, cool, windy days, and just at the close of the day, when they fly so slow and low, being loaded down, often tacking to the right and left, against a strong wind—then to raise over the high fence, just as they reach home, is a little too much.

In the month of April when our little busy workers go forth and find the first pollen, they are very eager and will stay out until quite cool, toward the close of the day. Any obstruction just as they begin to hover, for a place to alight, may cause them to drop, which ends their day, for before morning they are gone.

I have one hive which is shaded by my house after 4 o'clock, and I have often picked up 40 bees from the ground within 1 foot of the hive with their legs loaded down with pollen, warmed them up, and had the pleasure of seeing them go home rejoicing.

In the month of April bees are of more importance than at any other time in the year. A few bees in early spring bear about the same ratio to success as seed potatoes do to the whole crop. Our hives should be all provided with slanting boards from the front to the ground, so that all that fail to alight can crawl up.

Suppose that some authorities should surround our homes with a high fence and provide steps up one side and down the other and oblige us to carry everything, even our wood and water, over it, how would we like it? Mr. H. may say we cannot fly; this is true, but we can walk and carry a burden up hill just as well as they.

Another objection is appearance. The apiary should be a thing of beauty—an ornament to the neighborhood, in which it is located.

If Mr. H. should surround his apiary with that high fence, people as they pass by may say Mr. H. has become a bull tamer, or keeps the town pound.

Addison, N. Y.

SELECTIONS FROM OUR LETTER BOX

New Foundation.—Seeing an article by J. W. Porter, in the Bee Journal on "Fresh Made Comb Foundation," let me say that my experience, and that of a large number of other bee-keepers, is decidedly in accordance with Mr. Porter's views of the matter. So thoroughly convinced am I of this, that I use no surplus foundation over 2 weeks, and no brood foundation over 3 weeks old. This I know entails considerable extra expense, because it brings all the work, when my apiary needs me, yet I know that the quality of the foundation more than pays for the extra cost. There is also a proper time to roll the sheets into foundation, and the fact is, that the making of good foundation is not childs' play. T. L. Von Dorn.

Omaha, Neb.

Gathering Pollen.—Bees in this section of Ohio are in prime condition; I have lost none. I put all but two in my winter bee house on Dec. 31, 1881, and put them out Feb. 14. My bees gathered their first pollen on Feb. 27. I find plenty of brood in all stages. I have 67 colonies all in good condition.

Leonidas Carson.

Frederick, O., March 10, 1882.

Forty-six Days Earlier.—There has not been more than 6 inches of snow here this winter, if it had all been added together. The coldest day through the winter was January 17th, the mercury went down to 8° below zero. It did not remain so long, for the bees had frequent flights through each month of the winter. I packed 26 colonies in straw and chaff, and 8 in a bank cave last November. All wintered well. They carried in the first pollen that I took notice of March 2d. That was 46 days earlier than they did last spring. There are no Cyprian or Palestine bees in this part of the country.

Palmyra, Pa. Hibert Clark.

Prospect Never Better.—Bees are wintering well, both in doors and out; and if those out do not come through safely it will not be from a lack of "purifying flights." The weather has been so mild that there was scarcely a week in which they could not fly. Of course, March and April must tell the story of our wintering, but our bees are all well now, and we think they will come through "booming" from present appearances. Certainly the prospect was never better at this season. C. S. Burt.

Brecksville, O., March 9, 1882.

Returning Combs with Pollen.—I have a number of combs, extracted last fall, which contain a great deal of pollen. Will this pollen be cleaned out by the bees, when I give the combs back to them as soon as they can fly freely, or is it not advisable to give such combs to the bees? Will such old pollen probably injure the bees and brood? Please answer in Bee Journal. W. S.

Grand Island, Neb.

[Unless moldy, soured, or very hard, give them to the bees. They will be a valuable assistance in building up. —Ed.]

Wants a Queen Early.—I have a colony of bees the queen in which is unfertilized. Where can I get one about the 1st of April? I have black bees, and wish to Italianize them.

Holland, Mich. M. Pelon.

[By referring to our advertising columns you will get the desired information.—Ed.]

Ice Attracting Moisture.—On page 412, vol. 15, of the BEE JOURNAL, I find a statement by Chas. Dadant, that ice, placed in a bee-cellar to keep down the temperature in spring, will draw moisture to itself, instead of giving it off; and if I remember correctly, I think it was Professor Cook who said that water in the cellar would accomplish the same purpose. In view of a discussion in another paper just now this matter is of special interest. I have great confidence in Mr. Dadant as one of our most scientific bee-keepers. If he would explain through the JOURNAL how it is that ice will take moisture from the air, making it drier, and how such is known to be the fact, perhaps he would oblige others besides.

Lindsay, Ont. A BEE-KEEPER.

Bees in Maine.—I am much pleased with the BEE JOURNAL, and am especially interested in the correspondents' columns, when the writers give their own methods in the management of bees, together with the result obtained, so that by studying the experiences of many, all may learn wisdom in the management of the apiary. As I take it for granted that in this business, as in everything else, all is not yet known that may be. Much is said in the JOURNAL about Mrs. Lizzie E. Cotton, and in nearly every instance it is to her discredit. Mrs. C. may have treated some others in a manner to convince them that she is a fraud, and if what some of the correspondents say in the BEE JOURNAL is true, she certainly desires censure. I believe in speaking well for a bridge that carries one safely over, and must, in justice to Mrs. Cotton, say that in my dealings with her she has been perfectly "square." I judge this has been a good winter for bees in this section of the country. Mine have had a flight nearly every week, although some days the mercury went 28° below zero. The cold would last but a day or two, then we would have several days of warm, sunny weather, and the "yellow jackets" would come out for a sport in the open air. As I write, the mercury in my yard near the hives stands at 60° above. How is that for southern Vermont in midwinter. SEYMOUR H. WOOD.

St. Albans, Vt., Feb. 15, 1882.

Does Cold Weather Kill the Bees.—I think my bees will come out all right this spring. I am wintering out of doors, as I did last year. They have not been a month without having a flight all the winter. What a contrast to last year, when from Oct. 18, 1880, till the middle of March, 1881, not a bee was out of the hive. Mine were out yesterday and flying all over the village, and appear very strong and healthy, with no sign of dysentery. The cold wave struck here in January; 33° below zero; only a 1 inch board (the hive) between that cold and my bees, and yet they are alive, strong, and healthy—is it the cold that kills bees? I think not, or mine would have been dead now.

GEO. GARLICK.

Warsaw, Ont., March 3, 1882.

How My Bees Wintered.—I have about 65 colonies of bees of my own and 10 others under my care. Of these 75 colonies 1 has died from starvation and 2 from queenlessness. I have 20 colonies that I am working on the shares, which I have not seen yet. I have no doubt but they are doing well, as they were in a good cave. I left 9 colonies on the summer stand. Those that were in the cellar did the best. Some think that bees winter best on the summer stands, but I beg to differ. There is nothing better for bees than a good dry cellar, and that can be obtained by walling with brick, flooring with brick and cementing the whole with a coat of plastering; veltilate the cellar with a pipe from the center above, to allow the foul air to escape, to give health to the bees.

THOMAS PRALL.

Carlisle, Iowa, March 3, 1882.

Humbug.—I enclose you a circular which I received from Mrs. L. E. Cotton. I sent her six dollars for one of her controllable hives, expecting to receive a full size hive, but in return got a little model worth about 10c. I consider that I did not receive any value for my money, as the whole thing cost me $6.75, and was of no value whatever except fire wood. I think she should be published as a first-class humbug. C. H. PARKER.

Coldbrook Springs, Mass.

[In the circular of Mrs. Cotton, she proposes to furnish "one sample hive complete," and she should do so, or be content to be classed as a fraud.—ED.]

A Correction.—The BEE JOURNAL for Feb. 22 is at hand. In my article on page 120, 2d line from the bottom of the 1st column, the types make me say, "capable of sexual semen and fecundation," etc., instead of "capable of sexual union," etc. Please make correction.

WM. R. HOWARD.

Kingston, Tex.

Bee Bacterium.—I must inform Dr. Southwick that I, too, have an encyclopædia, and that I was aware of the technical definition of the words bacteria and bacterium; but that I used it with the meaning usually applied by chemists and physicians. As the Doctor says they are the beginning of fermentation, and I guess the middle and end of it, too, those conditions which favor fermentation, favor bacteria. More honey ferments in the hives about the time that dysentery is present (in spring and winter) than at any other time. All of the "considerate," please consider this fact, viz: That bacteria thrives best in a damp, medium temperature when in bee hives, as is proven by all our experiences. I am getting out a patent on bacteria, and I wish the Doctor would desist from meddling with it. I have just spent a pleasant 24 hours with George Grimm, here at my home, and I was surprised to find a man of only 22 years. But then, he cannot blame me for this mistake, for he was surprised at not finding me "much older;" probably he expected to find me in my dotage. We had a hard-fisted practical visit, talking over marketing honey, overstocking the field, etc., not saying a word about bees by the lb., or Cyprians in any quantity whatever. We had the pleasure of seeing the bees flying strong and lively, and carrying in large loads of pollen from the pussy willows and soft maples on that day, March 2. Bees all through this vicinity are in fine order; that is, all there are left from 1880-81 winter's fury. JAMES HEDDON.

Dowagiac, Mich., March 4, 1882.

Albino Bee.—I would like a description of the Albino bee.

Canton, O. CHAS. A. PONTIUS.

[See BEE JOURNAL for Oct. 19, 1881, page 331. The article is too lengthy for reproduction, with justice to our readers.—ED.]

Remarkably Strong.—I examined my bees March 2, and was surprised to find some light colonies, that I put on to four or five frames last November, to be strong in bees now, and hundreds of young bees hatching. I had to give them more room, and the full colonies then have brood in 6 frames now. Only 1 colony in the yard that had no brood, and that was a black queen that I obtained late last fall, to put in a queenless colony—the only black queen I have, and I have sold her, with 10 others, if I can get ready early in the season. If the weather holds favorable, I can divide by May 1, if I can get the queens.

JAS. S. LORD.

Linden, N. Y., March 6, 1882.

From Oregon.—I found a man on the other side of the Santiam river that had 5 colonies of bees, and I prevailed on him to sell me 1 colony, as he said he only aimed to keep about 4 colonies as there was danger of overstocking. I think it is a good place for bees, for the settlers say there is a good number of wild bees in the woods, and it has been less than 30 years since the first were brought here and sold for $140 per colony. They have increased very fast to be many in the woods. There is very little interest taken in keeping bees here. We do not have winter here like in Illinois; it rains almost any day, and snows some, and the sun shines some. I sowed some wheat here the 23d day of December. It is up and looks very nice. DAVID RICE.

Lebanon, Ore., Feb. 15, 1882.

Rye Meal for Bees.—The best way to feed bees with rye flour, is to fill a bag made of mosquito netting and hang it up in a box with the open part exposed to the sun. In this way the bees are not smothered. They cluster around the outside of the bag and gather the flour through the meshes. My bees are working at it now very busily. D. C. MILLETT.

Holmesburg, Pa., March 3, 1882.

Sweet Clover for Texas.—I see you recommend sweet clover (*Melilotus Alba*) as a honey producer. 1. Do you think it would succeed in Northern Texas? 2. What time should it be sown in this latitude? I embarked in the bee business last spring with 14 colonies, and increased to 34. All are in fine condition this spring. Bee-keepers will meet in McKinney the 10th inst., for the purpose of organizing a County Association. I am well pleased with the Bee Journal.
T. C. Boone.
McKinney, Tex., March 3, 1882.

[1. We think sweet clover will prove better than anything you can plant, as it stands heat, drouth, rain, and cold admirably.

2. Plant in fall, winter, spring or summer; in fact, any time when the ground is damp; but do not expect to see it in bloom till the second season. —Ed.

The Season in California.—We have just had a glorious rain; to-day is fine. About all the old honey is out of first hands and scarce. I sold 1,000 lbs. of surplus, at good prices, at home; could have sold several thousand pounds more, if pushed, if I had it on hand. Hard to tell what the prospect is for a good honey season, but hope. Almonds are in bloom, also crocus; wild buckwheat just coming, willows, wild gooseberries, wild currants, and a few acacias are giving abundance of bloom for pollen, and the bees do not lose a minute. We have had enough rain in this section; at present the ground is too wet to plow. Bees commenced to breed in January. No brood from Oct. 15 to Jan. 1. Bees are in good condition, with plenty of natural stores. The season has been very cold and is backward. Manzanita was a total failure here—cause, frost more than usual. The Bee Journal will be wanted as long as I am in the business, "and don't you forget it." J. D. Enas.
Napa, Cal., March 2, 1882.

An Open Winter in Kentucky.—My bees are of my own rearing, as I go with Doolittle and Heddon, and think I was ahead of them before I ever heard the leather-colored bees discussed. Bees this winter, contrary to my expectation, have wintered splendidly. I have not lost a colony, and only such as had but about 3 lbs. of honey, last fall, have starved. I could have bought bees last fall for almost a song, but could not tell what sort of a winter we would have. Now I cannot buy them at any price. I had hoped that, as my neighbors would persist in keeping common bees and would neither sell nor Italianize them, that they would all die this winter, but the winter was warm with nothing but rain and mud all through; no ice, except Nov. 28th.

My advertisement in the Bee Journal of last year brought so many orders that I could have sold twice as many bees as I could spare.
Paint Lick, Ky. R. M. Argo.

Cleaning Barrels.—I have a cask which has contained whisky and grape vinegar, but I wish to use it to put my dissolved sugar in for bee feed. Please state how to treat it to make it suitable for that purpose.
Canton, O. E. H. Morris.

[If for spring feeding, when bees are flying quite frequently, scald it out with a strong solution of soda. If for winter feeding, do not use it. You cannot be too careful of the character of feed for winter, and should risk nothing to chance.—Ed.]

A Difference in Races.—I find a great difference in the races of bees in regard to breeding early. The Cyprians with me the last four seasons have outstripped the Italians amazingly. I now have the Syrians, but as yet they are behind the Cyprians. I have 30 colonies of the latter in booming condition, with brood in from 2 to 4 frames. The Italians are also breeding nicely, but as yet the Syrians have very little brood. Yesterday they brought in new pollen, and to-day they just rolled it in. What is the difference between Bokhara and sweet clover? G. J. Yoder.
Middlebury, Ind., March 2, 1882.

[There is no difference that we can distinguish.—Ed.]

Bees in Cellar.—My 90 colonies of bees are all in the cellar, and are, so far, in splendid condition. I had two or three out yesterday to examine. These are very dry and healthy. The queens have been laying for about two weeks and have brood in all stages. While in winter quarters, I give thorough ventilation and kept the temperature from 42° to 48°. Some claim that bees cannot be wintered well in a cellar during a warm winter like this, but my experience is against it. We have had no zero weather yet; 15° above is the coldest we have had. L. W. Van Kirk.
Washington, Pa.

Very Mild Winter.—My bees have all come through except 1 colony. They were busy carrying in pollen the 2nd inst., and yesterday they seemed to be getting honey from some source, but I cannot think where they would get honey this time of the year. March is here, and at this place we had no zero weather the past winter. The coldest it has been was 4° above zero, which was on the 24th of January, while the average temperature for the month of December was 34° above zero. The average for January, 24°, and the average for February, 32° above zero. So, you see, we have not had much cold here, but we have plenty of rain. I went into winter quarters with 11 colonies, packed in chaff on their summer stands; have lost but one so far—cause, sudden cold overtaking them before they could regain the cluster. The other colonies are all in good shape except 2, which are weak.
J. H. Eby.
North Robinson, O.

Preparing for Spring Work.—I am a disciple of Langstroth, and, on account of his poor health, am without a leader. My bees are all pure Italians, and are in Langstroth hives. The queens are from 4 to 5 years old; each colony is in fair condition, but yet not as strong as I should like. All have full sets of combs for upper and lower stories, but drone and worker comb is in the same frame. I am not so desirous for increase as I am for honey, and have never thought that I got as much as I should. Please instruct me as to the best mode of proceedure the coming season? I want, as soon as possible, to have my bees in the best condition, for honey gathering. What should be the difference in price, between extracted honey in bulk, and the same put up in one pound square glass jars, neatly labeled and capped.
Oxford, O. Lynn Bonham.

[On page 133 of the Bee Journal for March 1, you will find an article from the pen of G. M. Doolittle, treating upon the subject of spring preparation. We can heartily commend its careful perusal to any bee-keeper who prefers to run for honey, supplementing it, however, with the advice to carefully trim out all patches of drone comb with a narrow-bladed, sharp knife. This, of course, can be done without injuring worker brood, and if done early will be rebuilt with worker comb, if given to the colony only as fast as required.

The difference in price of extracted honey in bulk, and the same in attractive small packages of any kind, neatly labeled, should more than balance the difference in cost of packages, the time and expense of preparation, and a remunerative profit as recompense for superior taste and care. Where honey is sold in bulk the producer has only to convince the first purchaser as to purity and desirableness of the article, after which he becomes unknown in connection with future transactions; but with the small packages, when neatly labeled, and with producer's name printed or written on each label (as it should be) as a guarantee or voucher for the article, he becomes morally accountable to each individual consumer, and the profits should be proportionate to the responsibility or accountability.—Ed.]

Bees Doing Well.—Bees are carrying pollen and some honey from early fruit bloom and breeding up rapidly. We have had no winter here; not 4 days together that bees could not fly. My early garden plants, etc., are all up and growing fine.
E. P. Massey.
Waco, Texas, March 4, 1882.

Old Fogy Bee-Keepers.—I am somewhat bothered with fogy bee-keepers in our neighborhood, who keep black bees which mate with our Italian queens, and we cannot prevent it. They are also in our way in the honey market. We go to a good deal of expense and trouble to get our honey in nice shape for market, and ask a reasonable price for it, and along comes one of the fogies with a coffee box or a cigar box may-be half full, and offers it for 10 or 12 cents a pound, thus putting our price down, or tries to, at least. One neighbor whom I call fogy (I do not know what others may call him), has his bees all in box hives, sitting on crooked, warped boards. The ants, roaches, cold, rain and snow, can get in and through the hives, and yet he has earlier swarms than I have; his bees always come out pretty well in the spring, and he always sells so much honey. Last season he sold two cigar boxes full of honey. Another, who has all black bees in box hives, when a swarm issues, runs and gets an old board and saws it up, and nails it together for his bees, if he has no empty nail-keg handy. An enterprising bee-keeper, a friend of mine, asked him if he would sell some of his bees. In reply he said he did not know how many he had—his old woman did not like to sell any, as she would sell her luck. So it is with them; they know more than anybody else, and they have and will learn no way but their own. One neighbor has one colony, and the hens have taken it for a roosting-place; it will come out all right next spring. My bees are doing well on the summer stands. 1. What must I do to prevent robbing? I lost 6 colonies one season by robbers. 2. Are hybrid bees as good honey-gatherers as pure Italians. 3. I am feeding some weak colonies—can I feed too much? 4. What is the best feed for bees? S. J. SMITH.
Myersville, Md.

[1. Close the entrances to the colonies being robbed so as to let in but one bee at a time; if this does not stop it, exchange places with the hives.

2. Yes; if the honey-field be near at hand.

3. No; but more than is necessary is a waste of feed. However, do not feed to the extent of embarrassing the queen.

4. Good honey in spring, with a little warm water to thin it, is the best you can use.—ED.]

Prospect Cheerful.—Bees are in good condition here. I had 4 colonies last fall; 1 become queenless and died; the rest are strong in numbers. They are bringing in pollen to-day. I lost 9 last winter—all I had. I obtained 1 in the spring, and they gave me 3 increase. I think this will be a good honey season. I am always glad to get the BEE JOURNAL.
E. P. HADLEY.
Sheridan, Ind., March 1, 1882.

Location Selected.—I have heard old bee-hunters — not bee-keepers — say that when a swarm left the hive and flew away, that they always had their tree selected and cleaned out. I did not dispute them, but had my own opinion about it. Is it so?
H. L. EASTMAN.
Findley's Lake, N. Y.

[No, it is not always the case, but we think it may be true sometimes. It is true, however, that scouts generally move in advance of the swarm.—ED.]

Bees and Bloom.—I think, Mr. Editor, you are mistaken in your inference drawn from Mr. Mehan's statement (see page 130). As I understand it, his idea was that when grapes were ripe and ready to pick, if there were no flowers to draw the attention of the bees, they were very destructive to the grape crop, but not to blossoms. The bloom spoken of in the latter part of the quotation has reference to bloom on the ripe grape, and not flowers E. B. SOUTHWICK.
Mendon, Mich.

[Perhaps so, yet the general argument is unchanged.—ED.]

Delirious With Joy.—I am in a delerium ov joy, and mi ski iz a meller golden sunsett. Mi beas hev kommensed 2 swarm nearly 3 munths earlier than iz kustomary for the latitoode ov Detroit. i haint took enny sirpluss yit, butt am preparin fur the "sweet" okasion with vigger. Thee fremonter ov mi enthoosyasm iz bilen at 65 F. in the sun. 3 swarms kum owt 2-da and awl went intwo won hive. This iz a bigg thing, & speeks volumes for mi managemunt, & strain or prolifick queens. I am goin 2 drive under thee wire next fall, with the biggest hunney report on reckerd. You may kommense sellin pools now. Mi feelings indikate a pressure ov 200 lbs. 2 the squar inch ov surfase. B. HIX.

Not One Queenless.—About Feb. 20, I took a part of my bees out of the cellar, and found them in fine condition. I opened 2 hives and found brood in 2 combs; it came on cold and I put them back. March 2, I carried them all out, opened them, and every one had a queen and brood in 2 and some 3 combs. I had 2 Cyprians and 3 blacks that I bought this winter, and I could not see that any Cyprians or blacks had any more brood or were in any better shape. I have 21 colonies and 3 nuclei. I would mark 16 out of the 17 I put in last fall "extra," and 1 small; it was made up from a nucleus late in the fall, queen had just begun to lay. This reminds me of the condition of my bees last spring when I took them out, this was on April 9. The most of them had brood in two combs. One I noticed had not began to lay; I thought it very strange; it was a very fine, large colony of Italians, but soon she began, and I watched it with no little interest. When honey time came the hive was full of bees, and I sold it for $12.00. It gathered about 300 lbs. of honey. One other had just laid eggs, and another did not lay for a few days, and from these facts I think early breeding to much extent of no use; still, when we open our hives and find about the expected amount of brood, we say they are doing well. I will sometime give my little experience with 3 banded bees.
Rockton, Ill. R. GAMMON.

Drone Excluders.—Did you not make a mistake in the size of holes for drone excluders in last week's BEE JOURNAL. L. DENSMORE,
Livonia, N. Y., Feb. 27, 1882.

[It is possible; we have never used them, but took the dimensions from 3 samples in the BEE JOURNAL museum —two were of English and the other American manufacture.—ED.

Hive Improvement.—1. Will you give a description of "an improvement on the Langstroth style of frame and a model for illustrating a new style of hive for wintering out-of-doors," referred to on page 411 of the JOURNAL, with size and opinion of same. 2. Would it be any disadvantage to run the brood frames across the Langstroth hive? The frames would then be 13½ long, and nice to operate. It would also be a convenient length for nucleus hives, and consequently interchangeable. We have a cold snap just now. Weather so far has been very fine, and bees are looking just splendid. N. EMMERSON.
Exeter, Kans.

[1. If you will address D. A. Jones, Beeton, Ont., he will probably give you the desired information; we cannot.

2. You would then have to put the entrance in the side; which would make practically a "long-idea" hive. There are several in use approximating nearly the same thing.—ED.]

Good Instruction.—The article by Mr. G. M. Doolittle in the BEE JOURNAL for Feb. 8, is worth to me more than a year's subscription. My bees are in the best condition, at this season of the year, that I have ever known them to be. We usually have an abundant poplar bloom about the middle of May, but heretofore the bees would not be strong enough to gather it; but Mr. Doolittle has told us how to secure it.
W. C. R. KEMP.
Orleans, Ind., March 3, 1882.

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

THE AMERICAN BEE JOURNAL

RATES FOR ADVERTISING,

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance:

For **4** weeks		....	**10**	per cent. discount.
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Transient Advertisements payable in advance. —Yearly Contracts payable quarterly, in advance.

THOMAS G. NEWMAN,

974 West Madison Street., **Chicago, Ill.**

Special Notices.

The Apiary Register devotes 2 pages to each colony, ruled and printed, and is so arranged that a single glance will give a complete history of the colony.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

New Price Lists.—We have received new Apiarian Catalogues and Price Lists from the following:

Chas. H. Lake, Baltimore, Md.
Jas. S. Lord, Linden, N. Y.
J. P. Moore, Morgan, Ky.
Bright Bros., Mazeppa, Minn.
H. M. Morris, Rantoul, Ill.
W. J. Davis, Youngsville, Pa.
Smith & Smith, Kenton, O.
E. T. Flanagan, Belleville, Ill.
W. J. Pettitt, Dover, England.
E. A. Thomas, Colerain, Mass.

The following Catalogues of Garden, Field and Flower Seeds are also received.

Wm. Rennie, Toronto, Canada.
A. C. Nellis, Canajoharie, N. Y.

◆

To Promote a Vigorous Growth of the hair, use Parker's Hair Balsam. It restores the youthful color to gray hair, removes dandruff, and cures itching of the scalp. 11w5t

◆

☞ The Texas State Bee-Keepers' Convention will be held at McKinney, Texas, on Tuesday, April 25, 1882.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL, }
Monday, 10 a. m., March 13, 1882. }

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The market has an upward tendency, and I am now paying the following prices in cash: Light comb honey, in single comb sections, 17@21 cents; in larger boxes 2c. less. Extracted, 8@10c.

BEESWAX—Prime quality, 18@22c.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

HONEY—The retail demand for extracted, in small packages, is fair, but only an occasional barrel is sold for manufacturing purposes. It brings 7@11c. on arrival. Demand for comb honey is only in a retail way, and only choice white is salable. It would bring 20c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb, in 1 to 1½ lb. sections, 20@22c.; same in 2 to 3 lb. boxes, 17@20c.; dark and mixed, in 1 to 3 lb. boxes, 12½@15c. Extracted, white, 10@11c.; dark, 9c.

R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—There is a liberal supply of honey here for which trade is very little demand, and prices rule weak and irregular.

We quote as follows: White comb, in small boxes, 18@19c; dark, in small boxes, 12@14c. Extracted, white, 10@11c.; dark, 7@9c.

BEESWAX.—Prime quality, 21@23c.

THORN & CO., 11 and 13 Devoe avenue.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—The market remains unchanged; 1 and 2 lb. sections, of best white, sell readily at 21@22c.; glassed white, 16@17c.; buckwheat very dull at 15@16c. for unglassed. Extracted, small packages, 12c.; large packages, 11c. per lb.

BEESWAX—Scarce at 25@30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—A sale of a car-load of comb, principally dark, is noted at 12c. It was purchased on Eastern account. Also, a 10 case lot of choice extracted at 9¾c. Inquiry is very light.

We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8¾@10c.; dark and candied, 7@8c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dull and lower to sell; season about over. Strained offered at 8c. and unsold. Comb quotably in fair demand at 18@22c.

BEESWAX—Stiff at 20@21c. for prime.

R. C. GREER & Co., 117 N. Main Street.

◆

☞ The spring meeting of the Mahoning Valley Bee-Keepers' Association, will be held at Berlin Center, Mahoning Co., Ohio, in the Town Hall, on Saturday, March 25, at 1 p. m., sharp. All interested in the science of apiculture are invited to be present and participate in the discussions of the day. The following questions will be discussed: "The merits of the different races of bees." "The best method of securing surplus honey." "Which is most profitable to the bee-keeper, comb or extracted honey?" An essay on pasturage or forage for bees will be given.

LEONIDAS CARSON, *Pres.*

◆

☞ The spring meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., May 9th, 1882. M. C. BEAN, *Secy.*

Local Convention Directory.

1882. *Time and Place of Meeting.*

March 12—Anderson Co., Ky., at Lawrenceburg, Ky.
J. M. Johnson, Sec.

15—New Jersey State, New Brunswick, N. J.

April 1—Barren Co., Ky., at Sinking Spring, Ky.

11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.

19, 20—Tuscarawas and Muskingum Valley, at Coshocton, O.
J. A. Bucklew, Sec., Clarks, O.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May 2, 3—Eastern N. Y. Union, at Cobleskill, N. Y.
C. Quackenbush, Sec., Barnesville, N. Y.

11—Champlain Valley, at Middlebury, Vt.
T. Brookins, Sec., East Shoreham, Vt.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

◆

☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

◆

☞ It is a fact that horse dealers are buying horses with ringbones and spavins, because they can make money by using Kendall's Spavin Cure. 9w5t

◆

"**How do You Manage,**" said a lady to her friend, "to appear so happy all the time?" "I always have Parker's Ginger Tonic handy," was the reply, "and thus keep myself and family in good health. When I am well I always feel good natured." See other column. 11w5t

PRICE LIST OF
Choice Italian Bees and Queens,
mailed on application. Address,
W. J. DAVIS,
11w4t Youngsville, Warren Co., Pa.

Bees and Queens a Specialty.

I have a choice lot of Tested Italian Queens, also Full Colonies of Bees, I offer for sale cheap. I shall breed and have for sale after June 1st, young Queens from the best of Imported stock. Satisfaction guaranteed. Price list free.
11w5m **I. S. CROWFOOT**, Hartford, Wis.

FOR SALE—150 Colonies of Italian Bees in improved Quinby hives, in prime condition.
39w1y L. C. AXTELL, Roseville, Warren Co., Ill.

FREE! FREE!

Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.
11wtf E. A. THOMAS & CO., Coleraine, Mass.

FOR SALE—Bound volumes of the American Bee Journal and Gleanings in Bee-Culture.
11w1tp W. H. HOBSON, Irving, Montgomery co., Ill.

FULL COLONIES OF YELLOW BEES,
Not excelled in any point of value; also barrels of Honey. **JAMES M. MARVIN**, St. Charles, Kane County, Ill. 11w2tp

CLUBBING LIST FOR 1882.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	Club.
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A. I. Root)	3 00..	2 75
Bee-Keepers' Magazine (A. J. King).	3 00 .	2 60
Bee-Kecpers' Instructor (W. Thomas)	2 50..	2 35
The 4 above-named papers	4 50..	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A. G. Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 7 above-named papers	6 30..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) ..	2 40..	2 25
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

☞ We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal.

BE SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian, Cyprian and Holy Land Queens and Bees.

J. C. & H. P. SAYLES,
4sm15t Hartford, Wis.

1882-Southern Headquarters.-1882

For Early Italian and Cyprian Queens;

Imported and Home-bred; Nuclei and Full Colonies. For quality and purity, my stock of bees cannot be excelled. I make a specialty of manufacturing the Dunham Foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Catalogue, giving directions for introducing queens, and remarks on the New Races of Bees. Address,

DR. J. P. H. BROWN,
5smtf Augusta, Ga.

ONE-PIECE SECTIONS a specialty. Pound size, $4.50 per 1,000. L. Hives 50c. Circular free, BYRON WALKER & CO., Capac, Mich.
8sm12t p

D. A. PIKE, Box 19, Smithsburg, Wash. Co., Md., breeder of those **Beautiful Albino and Italian Queens and Bees**, which gave universal satisfaction last season. Send for circular, 8sm6t

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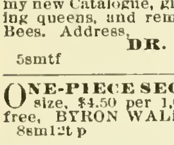
ANOTHER NEW IDEA.

Foundation all ready for business. Every sheet wired and bound around with a light wooden rim, ready to adjust instantly in your frame. No advance in price. Small sample for 6 cents. I shall also breed choice Italian and Holy Land Queens, practicing a new stimulative process. Write now for prices and particulars. Address,
9smly **JOHN H. MARTIN**, Hartford, N. Y.

ITALIAN BEES.—Having wintered without the loss of a colony, I will sell a few select colonies in the spring, and Queens during the season. Address,
R. M. ARGO,
9sm3t Paint Lick, Garrard County, Ky.

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
974 West Madison Street, **Chicago, Ill.**



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KNOW THYSELF.

NOW READY, LAKES CIRCULAR
ITALIAN BEES & QUEENS
HIVES, SECTIONS, FEEDERS &C.
BALTIMORE
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65 *ENGRAVINGS*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
974 West Madison Street, CHICAGO, ILL.

BEE FARM AND APIARY

FOR SALE.

The undersigned offers his Bee Farm for sale, situated one-half mile from Plainwell, Allegan Co., Mich., containing 7 acres of land, with all kinds of choice fruit, good buildings, including honey house and 2 house-apiaries, with 100 Colonies of Italian and Hybrid Bees. Price, including Bees, $3,000, or $2,500 without bees. For further particulars address the undersigned at Petoskey, Emmett Co., Mich. **WM. E. FORBES.**
10w3tp

HEADQUARTERS FOR THE

Golden Italians & Original Albinos,

BEES AND QUEENS.

Send fo Circular. **J. M. C. TAYLOR,**
10wtf Lewistown, Frederick Co., Md.

Italian Bees.

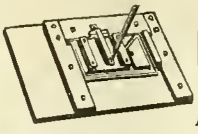
A few Choice Colonies for sale. Address,

H. D. EDWARDS,
10w4t **Delhi, Jersey County, Ill.**

WANTED—A man to help work with Bees, make hives, paint, etc.; also, a good second-hand Gem Planer, cheap. Address,
10w2t D. G. WEBSTER, Blaine, Boone Co., Ill.

CHEAP.--CHEAP.

We offer for sale 180 good Colonies of pure Italian and Cyprian Bees, mostly in Langstruth and American Hives, at $4 each; 100 new, painted, Langstroth and American Hives at $1.50 each; 3,500 Boss Sections, $2 per 500; about 30 Queens, tested, $1 each; 300 lbs. Comb Foundation, 30c. per lb; two new Extractors, Muth's and Everett's, $4 each; one 12-inch roll Foundation Machine, $15. We will pay shipping charges on orders of $5 and upwards. Satisfaction given or money refunded.
11w6t **A. T. SEDGEWICK**, Corning, Ohio.



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FOUNDATION FASTENER.

A SIMPLE MACHINE

For FASTENING COMB FOUNDATION to the TOP AND ENDS OF BROOD FRAMES, OR IN SECTION BOXES, securely and rapidly. Send for circular. **S. GOODRICH,**
8wtf **Urbana, Ill.**

DODGE'S FEEDER

STILL AHEAD!

Sample by Mail............................ 30c.
Per dozen, by express......................$2 00

Catalogue and Price List of Bee-Keepers' Supplies and Small Fruit Plants, free to any address.
8w4t **U. E. DODGE**, Fredonia, N. Y.

Basswood and Catalpa

SEEDLINGS.

One year old, nice Trees, by mail, postpaid, $2.50 per 100; by express or freight, $1.50 per 100; by express or freight, $9.00 per 1,000. Catalpa equals Basswood for honey, and the wood is proof against decay. Address, H. M. MORRIS,
10w5t Nurseryman, Rantoul, Ill.

1882. Consult your interest, and send for my new circular and price list of Colonies, Nuclei and Queens. Address,
9sm8t **S. D. McLEAN**, Columbia, Tenn.

SEEDS FOR

Honey Plants.

I keep at all times a full supply of Seeds for Honey Plants, including

Melilot Clover,
White Clover,
Alsike Clover,
Mammoth Mignonette, &c.

Send for my catalogue which gives prices and instructions for planting—sent free upon application.

ALFRED H. NEWMAN,
972 West Madison Street, Chicago, Ill.

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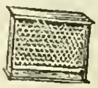

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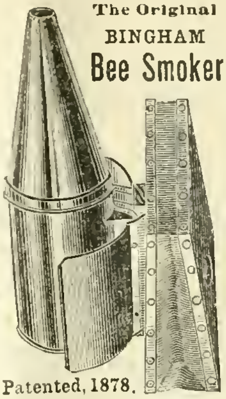

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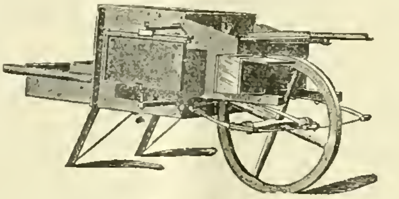

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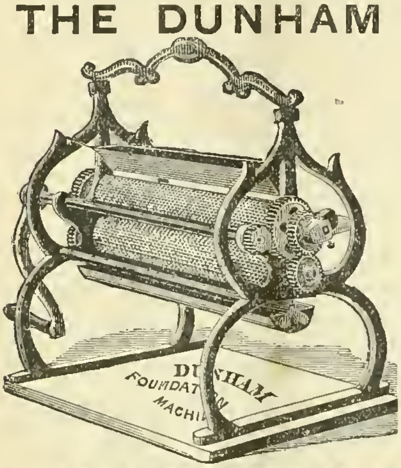

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TOPICS PRESENTED THIS WEEK.

Editorial—

The Cheap Queen Traffic Again 177
Flower Shows in England.................... 177
Conflicting Theories of Bee-Keepers...... 178
"Miner" Points.................................. 178
Items..177, 178
Bee-Keeping in Florida 179

Among Our Exchanges—

A Standard Frame 179
Bee Pasturage................................... 180
Reversible Frame.... 180
Spring Dwindling.............................. 180
Bee Stings 181
How to Start Keeping Bees in Texas 181
To Beginners................................... 181

Correspondence—

Some Slovenly Bee-Keeping 181
A Few Practical Hints 181
Bee-Keeping in Nebraska.................... 182
Honey from Corn... 182
Practical Use of Comb Foundation........ 182
The Temperature of Cellars................ 183
Untested or "Dollar" Queens............... 183
Does it Pay to Rear Cheap Queens?........ 184
Is Our Chemist Abroad?...................... 184
Manufacture of Comb Honey.............. 184
Do Bees Puncture Grapes?................... 185

Selections from Our Letter Box—

Honey from Cotton........................... 185
Foundation Fastener.......................... 185
Coral Berry Bush.............................. 185
The Uses of Glucose.......................... 186
Drouth in Kansas........................ .. 186
Syrian Bees...................................... 186
Sweet Clover with Wheat 186
Red Clover Queens and Bees............... 186
Kentucky Bees all Right..................... 186
Bees in Better Condition than for Years.. 186
The Outlook the Best for Years............ 186
A Veteran Bee-Keeper... 186
Feeding Syrups................................. 186
Experimental Wintering..................... 186
Bees in Kansas................................. 186
Lost One out of Fifty-three 186
Clipping Queen's Wing....................... 187
A Reversible Frame 187
Foundation Holder............................ 187
How I Bind the Bee Journal................ 187
What a Contrast 187
Profits of One Year........................... 187
The Winter in Nebraska............. 187
Doing Well............. 187
Bees Feeding on Pudding and Molasses... 187
How to Sow Catnip........................... 188
Dimensions of a Two-Pound Can.......... 188
Molding Combs................................ 188
Profits $25 per Colony 188

The Cheap Queen Traffic Again.

The communication from Mr. W. Z. Hutchinson, on page 183, on this subject, calls for a few remarks.

Our correspondent certainly misunderstood our expression, which he attempts to reproduce in his first paragraph. Had he copied the sentence entire, it would give the impression that where one might economize more, scores of prudent breeders would far exceed Mr. Salisbury's expenses. Not only have we cited several cases where experienced and extensive breeders have found the cheap queen traffic undesirable, but in this issue we publish a letter (on page 187) from another.

We have carefully read our article through to find the word "stripes" which our correspondent quotes upon us—it is not there, but, instead, in our closing paragraph we said the "bee-keepers want better stock, more honey, longer-lived bees, and certain profits." The matter of stripes was certainly and purposely omitted, for the "best bees" will have just the requisite number, whether it be one or a dozen. As we have understood the matter, queens are not tested for stripes alone, but for the best business qualities, and if this object is not kept in view in testing, why, untested queens might fill the bill for all but stripes.

Nor did we say anything about "hybrid queens," as charged in the third paragraph given, but "worthless trash" is what we spoke of, and many queens sent out, which throw three-banded workers may be quite as worthless as many which show not one band plainly. But when a "tested" queen is bought or sold, it is supposed her progeny will prove among the best for all desirable qualities, as well as possess the "three bands," which are only a "test of purity," or pure mating.

The correspondent's citation of the case of Dr. J. P. H. Brown establishes no point, except that the Doctor, as we all know, is an honest, conscientious gentleman, who would not send out any inferior stock, if he knew or suspected it to be such, for any price; and further, he states in his circular that all his queens are reared from imported stock. They are not reared from "dollar" queens.

We do not wish to controvert anything in the sixth paragraph, nor in either of the succeeding ones, except where "stripes" are unfortunately and persistently attributed to us.

Again we repeat, the bee-keepers of America want the "best bee," and to this end all bees should be tested before leaving the hands of the breeder.

☞ "The Oriental Casket," published at 912 Arch St., Philadelphia, Pa., is a literary gem. The March number is full of things both interesting and useful. In appearance it is elegant; in price moderate; in all things it is a credit to art, and a pleasure to the reader.

Flower Shows in England.—"Flower Shows," says the *Gardeners' Chronicle*, "have become everywhere local institutions; they teach and they expand ideas; they promote that contact amongst horticulturists of all sections that was previously wanting, and have and are doing a power of good." The love for flowers is now universal. So says *Vick's Monthly*. Bee shows will soon become as popular as flower shows in Great Britain.

Conflicting Theories of Bee-Keepers.

Mr. Jacob Spence, of Toronto, Canada, wishes a formulation of the various theories, now so conflicting, into creeds, so that the less advanced bee-keepor may have certain landmarks which he can keep in view while acquiring a knowledge of the more intricate details of the business. Below will be found his views upon the subject, and a call for our committal, which we cheerfully respond to:

To some of us it is distressingly bewildering to find so many directly conflicting theories held by those who ought to be entitled to be looked up to as safe instructors. I think, too, that one very good way of bringing out truth is by clear statement of consistent theory—fairly founded on well ascertained facts and experiences. There are many interesting minor methods of detail, on which no doubt many various ways of working may be almost equally successful in bee increase and honey production—but, then, to keep the bees alive must be taken as the vital one thing needful.

Safe wintering and spring dwindling seem closely connected (or disconnected), and now to find out certain how to secure the one and prevent the other beyond ordinary peradventure, is where the real difficulty comes in. To know the cause (beyond doubt, of course), would be the proper key to the "how to prevent the dreadful spring dwindling;" and to really know the needful conditions of safe wintering, would go far toward this fulfillment. Here, then, would it not be especially important to make out very distinctly, particularly on these two points, how far all reputed orthodox authorities agree, and set down what can so be taken as fully settled creed, requiring little if any further discussion, but decidedly correct, and as such to be propounded to disciples as being thus far no longer doubtful? My idea is in this way to transfer as much as possible (especially in essentials) from the domain of the dubious into that of knowledge, and then proceed on this line.

I can only claim to class as a "novice" engaged in making experiments, results of which I may sometime deem worthy to communicate, but would much prefer to have less experimenting needful. This, it seems to me, should be accomplished less problematically, as well as less expensively, by utilizing confirmed conclusions and experiences, such as might be looked for from the fathers in the fascinating art.

I do earnestly wish, Mr. Editor, that yourself, and more of your very able correspondents, would turn more to these two vital parts of the programme. Do let us have fixed (not conflicting) creed on the ways and means of preserving the precious life of the "coming bee."

Bee-keeping, as an art or profession, is yet in its infancy, and the creeds to be determined are proportioned to the magnitude of the business. Were wintering the *only* problem to be solved, it would have been satisfactorily settled long ago; but scores of questions have been constantly arising, some of greater and others of lesser importance, and each claiming more or less the attention of all. Again, these experiments and results are all conducted from different standpoints, and reached through various channels, and hence diverse convictions are reached, and each as logical as the others.

Could nature and the variations of winter be controlled by artificial means as easily as can be the certainty of honey flow in summer, then the success of one winter's experiments can be duplicated the next; but until then, for any man to formulate his theories into a creed, or the majority of his successes into an invariable doctrine, would be to stamp him as an egotist, and bring disaster on his followers.

We are reaching results quite rapidly, and many important questions are settling in convictions; but to arrive at harmonious conclusions, on all the main topics, will be impossible, owing to the vast extent of country and difference of climate involved, as well as different phases of human nature to be drifted into one channel. More unanimity of thought on very many questions is desirable, but time will be required, and a convincing need of such unanimity, before it will be reached.

We are glad Mr. Spence is moved by the spirit of experiment, and is himself assisting to overcome some of the obstacles to uniform success, but in many things he will find that a creed which may be life-saving in his extreme latitude, would be as certain to work destruction further south or west. Still, it is none the less his imperative duty to investigate, as his own success depends in a great measure upon the modification he may make in the creeds of others.

* * *

☞Mr. W. C. Barry, of Mount Hope nurseries, Rochester, N. Y., has our thanks for a neatly printed pamphlet containing his two essays on "Ornamental Planting" and "Native Fruits," both of which we have read with much pleasure and profit.

* * *

☞No. 2 of the *California Apiculturist* has come to hand with an additional 4 pages, making 12 in all.

"Miner" Points.—In the *Home and Science Gossip*, of Rockford, Ills., Mr. F. M. Miner writes as follows:

In the Bee Journal, July 6, there is an ebullition of spleen, ignorance and self-conceit from one Robinson. Among other silly things he says he knows how to winter bees—snow excludes air; and Mr. Newman has sent his trash over the wide world to the disgrace of American prestige, and excluded any reply. Some of us ought to be in the insane asylum, claiming to be authorities while we differ radically on essentials.

We are astonished at the language used by Mr. Miner. The facts are that he sent us a communication last fall, and we put it into our "correspondence drawer," without reading, awaiting its selection to go into the Bee Journal. Some time after he wrote us that the editor of the *Guide* wanted him to write for it, and unless we could print it soon, he would be glad to have it to send to the *Guide*. As we were crowded with matter, and our compositors could not "set up" Mr. M.'s articles until they were copied, and as we were to busy to do so, at the "rush" at the end of the year, we at once sent the article to the *Guide*, as requested, without ever having read it. Mr. M.'s strong language is, therefore, wholly uncalled for.

During all the winter months we have a large drawer full of "communications," and another full of "letters" in waiting, all the time, and from this "store," we select such as we deem best to give our readers a savory meal each week. We are sorry if any should feel aggrieved, but cannot expect to please all. We shall, however, continue to do our best to serve up a good meal to those who sit at our table—the Bee Journal.

* * *

☞The editor of the Terrell, Texas, *Knight*, after mentioning the Bee Journal's recent change to 16 pages, adds: "The change has added to its prosperity and popularity. Its field of influence has been extended, and the industry it ably represents has been greatly advanced by the weekly publication." The *Knight* has our thanks for its very kind notice. To advance the industry of bee-keeping is our aim, on every occasion, and by every means at our command.

* * *

☞The *New England Bee-Journal* has again made its appearance, having been suspended from November to March. It is now expected to appear monthly, if sufficient support shall warrant it.

Bee-Keeping in Florida.

Mr. W. S. Hart, Vice President of the National Society for Florida, has sent us a copy of the *Florida Agriculturist*, which contains his "address to the Bee-Keepers' and Fair Directors of the State of Florida," advocating more and larger premiums for bees and honey at the next State Fair. Mr. Hart says that since its publication $27.50 has been added to the prizes for honey.

Having lately received the premium list for the State Fair, I have gone carefully over it, and can say that I not only have no fault to find with the awards there offered, but on the contrary consider every one well and wisely placed. Yet it seems to me that one of our rural industries that, with a little encouragement may greatly surpass in importance to the State, some for which liberal premiums are offered in the list, is sadly neglected. I refer to the bee-keeping interest, which includes the production of honey and wax, the raising of early queens for the northern bee-keepers, and the supplying of bees by the pound to replace those lost during the cold winters of the North. To be sure, there is a "Department O, for Poultry, Bees and Rabbits," but with seventy dollars offered for poultry, I do not see the first cent offered for bees. In "Department E, Table Luxuries," we find No. 12,—best specimen Florida honey $3.00. Also, No. 42,— best home made vinegar of any kind $1.00." Those two items afford the only chances for the bee-keeper to win a prize, and they together amount to $4.00. As the reason for this lack of encouragement probably rests more with the bee-keepers themselves, in not making known the importance of their industry, than with the Directors of the Exposition, I now take the liberty of presenting a few facts and figures to show that bees and their productions are, to say the least, worthy of as much consideration as poultry.

Mr. Thomas G. Newman, editor of the American Bee Journal, a large and handsome weekly, published at Chicago, Ill., in a late issue called for reports from the bee-keepers of the country, stating their success during the present year. In No. 41, issued Oct. 12th, is given a tabulated statement of the returns as far as received. The footings are as follows: colonies in the spring 137,636; fall 235,510; average increase 71 per cent. Extracted honey 5,477,176 pounds; comb honey 3,990,446 pounds, giving a total of 9,467,622 pounds, or an average of 69 pounds to the colony. Florida's share in this list so far as reported is, colonies in the spring, 2,354, in the fall 4,712; per cent. of increase 100. Extracted honey produced, 167,918 pounds; comb honey, 19,734 pounds; average per colony, 84 pounds. In commenting on these results, Mr. Newman remarks:—"There are in America about 3,000,000 colonies of bees, but our reports are from less than a quarter of a million, or one-twelfth of the whole. If the one-twelfth that are reported are a fair average of the whole, then the crop of American honey for 1881 amounts to 120,000,000 pounds. If we call it only a hundred millions, it is worth $15,000,000. Surely the industry is of sufficient magnitude to satisfy the most enthusiastic of its devotees." In Southern California, there are six hundred men who are engaged exclusively in bee-keeping, and yet they get a full crop on an average but once in three years, and some years thousands of colonies starve to death. While here in Florida I can not find any one that has ever known the crop to fail. This has been called a poor year for bees, yet my colonies have increased over 100 per cent. and produced 200 pounds of honey to the colony. The bees of several of my neighbors have done nearly as well. All are not fitted for bee-keepers, neither will all parts of this State produce honey in paying quantities, yet there is room for hundreds of industrious bee-keepers to come and locate where they can do annually as well and better than I have this year. For several reasons I think it probable that a larger per cent. of the apiarists of Florida reported to Mr. Newman than from most of the other States, so we will call the number one-sixth, which is certainly within bounds. Now multiply the 187,652 pounds of honey reported, by six, to get the approximate production of the State, and we have 1,125,912 pounds, worth $168,866.80. Perhaps a better idea of this amount may be had by stating that the editor of the Florida *Dispatch* (who ought to be a good judge) estimates the orange crop of the State for 1881 at 300,000 boxes of 140 oranges to the box, worth at $15.00 per thousand (about the usual average price obtained) $675,544, or not four times the value of the unnoticed honey crop. Hundreds of young orange groves are just coming into bearing, so that a few years will show several times our present production of the golden fruit. In the same ratio may our honey and beeswax crop be made to foot up among the millions of dollars' worth annually, if those who are fitted for the business will only take hold and make a *study* of the business, instead of trusting to the old "happy go lucky" way. The climate of Florida is not only peculiarly fitted for successful bee-keeping, as our harvest time is long, and we have no wintering troubles, but it also attracts many people from the North who come here seeking health without the strength to do heavy work, or the capital to hire it done for them. To such bee-keeping offers many inducements.

As Vice President for the State of Florida of the North American Bee-keepers' Society, I would respectfully call the attention of the Directors of our various State and County Fairs, and also that of the apiarists of the State to the above remarks, and ask them one and all to "put a shoulder to the wheel," and help to make bee-keeping one of the great money resources of this "land of flowers," in every legitimate way possible. Let us have liberal prizes offered at our fairs for bees and their products, and let the bee-keepers strive with each other to make the best display of their stock. Much may also be learned by forming bee-keepers' societies and holding conventions one or more times each year, where all can meet together and exchange ideas, and display their hives, extractors, extracted and comb honey, etc.

New Smyrna, Fla., Oct. 31, 1881.

P. S. I see no better way of settling up the coast and river country of all South Florida than by encouraging bee-keepers to come and locate where they find every requisite of success. As we depend almost entirely on wild pasturage for our bees, a wild, unsettled country is as good or better for an apiarist than any other, provided it be on the coast or some water course that will give him transportation in his own boat to some point of public transportation. In all South Florida there can scarcely be found a spot near the coast or some river, but what would be a profitable one for the bee-keeper. There also is found the land best suited to the orange, and as apiculture and orange culture are peculiarly fitted to go together, the apiarist can, during his leisure hours, clear a piece of land and plant it to trees, thereby forming a permanent nucleus for a future settlement.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

A Standard Frame. — The annual meeting of the British Bee-Keepers' Association, was held last month, and the following is a digest of the proceedings on this subject:

The most important motion affecting bee-keepers and bee-keeping generally was brought forward by the Rev. George Raynor as follows: "That it is desirable that the British Bee-Keepers' Association do set forth a standard frame, stamped by its sanction and authority, with the view to bringing such frame into general use, its size and form to be determined by a committee appointed for that purpose."

The question of a standard frame for general use has been discussed by all leading apiarists for a considerable length of time, the general opinion being that the matter should be taken up by the British Bee-Keepers' Association.

Mr. Raynor in introducing the motion spoke as follows: The resolution is one of no small importance to the bee-keepers of this country, and indeed I may say to all who are technically or otherwise interested in the art of bee-keeping. I will endeavor to state a few of the more prominent advantages such a frame should possess. First would be the interchangeability of all frames. How great a boon this would be I must chiefly leave to the makes of hives and the vendors of bees to tell you. This point cannot well be over-estimated, especially now that bee-culture is being taken up so extensively by some of our leading farmers.

A few days ago I received a letter from a cultivator of many acres in Lincolnshire to the effect that he was investing largely in bee-culture, and upon modern and approved principles. And what a field is opened to the bee-keeper by the thousands of acres of mustard with its fragrant golden bloom which this plant affords, the fields of white clover, and other mellifluous plants?

We must all rejoice that the farming interest at last is showing signs of a growing appreciation of this long-neglected industry; and in this view how highly necessary is it that, far more so than at any other period, that we should have a standard frame, as affording the greatest facility for the transfer and sale of bees, hives, and appliances. Honey extractors would come into more general use, since one size alone would be required, and their use would be greatly extended.

Now a "standard frame' does not imply a 'standard hive.' The hive may be of any size—*i. e.*, may contain any number you please of standard frames, hence the desirability of making the frame, and not the hive, the standard. Hence also it would appear best to state inside dimensions of frame, since some may prefer to use stouter material for frames than others, and it is important that the comb-surface should not vary.

"As regards our shows, I would say, do not make your 'standard frame' a *sine qua non* for hive competitions, but give it the preference *cœteris paribus*. It may be expected that I should state my own views of the size and form of frame most desirable, but this, I think, is a matter that may be well left to a committee to deal with. I may, however, say that the general view appears to be that a shallow rather than a deep frame should be adopted, providing the depth be not less than 8½ inches, nor the length than 12¾, in order that the frame may receive six 1 lb. sections.

The shape I think of less importance, although as giving a decided preference to a tapered frame I should advocate a 'double standard,' in other words a rectangular and a tapered frame of the same superficial contents, and from what I have stated above, the size would most nearly approach the Woodbury frame. Shallowed frames are most easy of manipulation, better for extracting, are more easily suspended in a vertical position in the hive, and there is no necessity for those abominations or queen-destroyers, called racks, to keep them in their places. It is said that bees winter better in deep frames, but with our modern appliances for winter and the contraction of the hive this objection has no force. Heat ascends, therefore with a deep frame, when the bees cluster at the top of the frames, the space below will be filled with cold air."

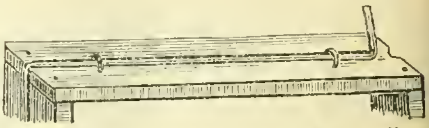
The motion was seconded by Mr. T. W. Cowan, and after some discussion was adopted unanimously. The following gentlemen were nominated as the Committee to carry out the resolution: Mr. C. N. Abbott, Mr. T. W. Cowan, Mr. F. Cheshire, Mr. J. G. Desborough, Mr. J. M. Hooker, Mr. A. Neighbour, Rev. G. Raynor, Rev. F. T. Scott.

Bee Pasturage.—The *Semi-Tropic California* has the following on this subject:

Very soon the warm, dry weather will come and the planting of trees for permanent bee pasturage should be attended to without a day's delay. Some experiments point to the Loynot or Japanese plum as a very valuable honey producer, blooming in the fall or winter and producing a fruit that is unequaled for jelly making. It withstands the frosts and is an evergreen, that is ornamental as well as useful. It would not perhaps be out of place to again call attention to the value of the acacia; besides the bloom it yields, which furnishes both pollen and honey, the timber is valuable as fuel, being equal if not superior to willow, and the wood being very light and white is just the kind of timber to convert into sections for comb honey; it can be prepared for that purpose on a good foot power buzz saw by any handy bee-keeper at home at spare times, thus saving a money outlay that has been a considerable item in the bee-keeper's expense account heretofore. It will, on ordinary good soil, grow to the size suitable to such purposes in two years from the planting of the seed, which should be put in the ground in the month of March. Blue gum is another tree of equal if not greater value, both on account of its honey producing qualities and its timber. The handling of the plants must necessarily require more attention than the acacia, but it will well repay the attention and expense bestowed upon it, as when once well rooted it will grow even in poor, sandy soil, and in a few years afford timber and fire-wood; and the time usually spent by the bee-keeper in clambering over crags and cliffs, and up almost impassable canons to secure his supply of fuel, if judiciously used in tree planting would afford a better result for his work, besides furnishing his bees with honey close at hand year after year, and but little if any danger of failure on account of dry weather. When the blue gum is cut down for any purpose, it will immediately sprout from the root and make a vigorous growth. This is not so with the acacia; but as it is no more trouble to grow it from the seed than to grow corn, the bee-keeper should not complain. As soon as the danger of spring frosts are over, plant. The delicate and agreeable fragrance of mignonette, which is imparted to the honey produced from it ranks it as of first importance among the flowers to be cultivated by the bee-keeper. During the month of March, or as soon as danger from frost is gone, sow the seed and spare not; be assured that nothing is better for bees, and very few if any blooming plants are better suited to our climate than mignonette.

Reversible Frame. — Mr. F. W. Burgess, Huntingdon, L. I., writes to *Gleanings* as follows on this subject.

At the convention recently held in Battle Creek, Mich., L. C. Whiting read a paper about the coming hive with reversible frames, etc., originated by Van Deusen, of Sprout Brook, N. Y. It may interest some to know that, a year ago, I made frames reversible, and have experienced the benefits enumerated in this paper. It can be applied to any frame with comb in, if desired. I have my material cut for frames for next year, and all are to use the metal arm. I use the L. frame with wires; for the support in the center, I use a strip ⅞ wide, of picture-back stuff—and by its use secure openings by its side through the cards for winter passages. I have always pressed the wires into the wax by the use of an "excavator" (everybody will know what that is, if they have ever been to a dentist), bending the point to an angle of 45 degrees, and on that foot cutting a slot to ride on the wire. Your button-hook arrangement is the same.



One great advantage of the reversible frame is to secure the comb well drawn out, and attached to both top and bottom bar.

I will suggest, that with my frame there is but little chance for the bees to stick them down—a metal arm resting on a metal rabbet. Again, it will always hang perpendicularly, there being but one place of contact; and if desirable to raise the frames from the bottom-board for winter, it is easily done by placing blocks under the lower arm.

By turning one arm under the bottom-bar, the other is secured fixed for hanging on the rabbet, and *vice versa*.

Spring Dwindling.—The London *Journal of Horticulture* remarks as follows:

Some bee-keepers are taking alarm at the large numbers of dead bees found in front of certain hives. These are generally cases where a large proportion of the stores had either been of unwholesome quality, as honey dew, or had not been properly sealed in autumn from too late feeding. An examination will generally reveal an abnormal quantity of food. How significant the fact that bees, as well as plants, hasten to propagate their species on the approach of danger to their own existence! There is a danger of such colonies working themselves to death. This is the American trouble known as "spring dwindling." The only cure for it is to remove all combs with unsealed or unwholesome stores, and supply others if they can be had of better quality, or give dry combs and sugar cake. At the same time contract the brood nest till the bees are crowded, and give any comb containing brood beyond what the bees can be crowded on, to any other healthy colony.

* * *

Bee-Stings.—Respecting the effect of bee-stings in rheumatism, a correspondent of *Gleanings* says:

> About a month since, a neighbor, living about six miles in the country, called on me to go out and examine a colony of blacks that he thought the moth were troubling. While there the lady told me that bee-stings had cured her of rheumatism. She said that she had for a long time been so troubled with it in her thigh and hip that it was difficult for her to walk across the house. Last summer she and her sister undertook to transfer a swarm of bees from an old gum, and not being acquainted with that kind of business, never having seen the operation performed, they got terribly stung before they got through. She was so badly stung that it made her quite sick; but since that time she has not been bothered with rheumatism.

* * *

How to Start in Keeping Bees in Texas.—Dr. Wm. R. Howard, in the Kansas *Bee-Keeper*, says:

> An apiary should be located within easy range of both prairie and timber, near some small stream, in order to have the advantage of the thicket and bottom, as well as prairie range. In the thickets and bottoms we have elms, wild plums, red-bud, ratan vines, honey locust, and many other honey plants of minor importance. On the prairie we have the horsemints, milkweeds, etc. Horsemint is one of our very best honey plants.
>
> The best way to get a start of bees here is to buy the blacks in box hives and transfer and Italianize them. Another way is to furnish hives and transfer on the halves. We have tried both plans and there is but little difference, where you don't go too far for the bees. We always bring our bees home in the boxes and transfer, either immediately before allowing to fly, or four or five days afterward, when they have become acquainted with their new location.

* * *

To Beginners.—The *American Agriculturist*, gives this good advice to the beginner:

> Those who contemplate starting in bee-keeping the coming season should procure at once, and thoroughly master some one of the several excellent manuals that treat of bees. This done, the prospective apiarist should subscribe for one of the apicultural papers, several of which are published in this country. The text book study will prepare one to read understandingly the paper, and by such reading a person will keep abreast of the improvements, and so will be in the way to take advantage of all that may help him. Apiculture is advancing rapidly, and he who does not keep informed will soon be left in the wake of his more enterprising brother. After a thorough study of the subject, it will pay well to visit some wide-awake bee-keeper, and spend a day or two with him. We are happy to state that one does not need to go far now in any part of the country to find such an one. Such a visit will do much to remove the timidity that one is apt to feel in approaching these insects. The book-knowledge will become practical, as the various truths and descriptions are illustrated.

CORRESPONDENCE

For the American Bee Journal.

Some Slovenly Bee-Keeping.

REV. L. JOHNSON.

"How many colonies of bees have you?"

"Ten or twelve."

"How have they wintered?"

"I don't know."

"How have you prepared them for wintering?"

"I have paid no attention to them. I have been too busy."

Such was the substance of a conversation I had with an old bee-keeper, as I arrived at his house late one evening not long since. Frequently had he requested me to come to see him and talk about bee-keeping. Until a late hour at night we remained up and almost every subject connected with the interest was discussed in his way. But as he took no bee paper, and never attended our Conventions, I found him far behind.

Next morning early we were in his bee-yard following him around to receive "instructions." His hives were of all shapes and patterns; some in boxes, some in movable combs, yet the frames of no two exactly of the same size. The tops of most of the hives were leaky or warped so that dampness and snow was penetrating the inside every storm. Many of them were tilted back so that rain falling on the alighting board would run into the hive. Some pigs had been running in the yard all winter, and these had rooted up the ground around the hives until the entrance of some of them was nearly blocked.

Three or four of the best were sitting under a cherry tree, in which the fowls had roosted all winter, and the tops were covered two or three inches deep with their droppings, which was being soaked into the hives and combs. When the hives were opened I found a little bunch of bees, perhaps a quart, old, black and sickly looking. When I told him I had hives with 10 or 11 combs covered, and young bees flying, he wondered why his did not do better, as he thought he had a good location.

This may be an extreme case, yet all over our land we find hundreds keeping bees who do but little better, yet these men say "bee-keeping does not pay." Suppose their sheep, hogs, or even larger stock were kept after the same fashion, who would expect anything but failure? These men are generally the most self-conceited men on bee matters of any we meet. They "have long ago learned everything about bees." "You can't tell me anything," etc. Some years ago, I sold one of these men 2 good colonies, and delivered them in good order; that winter he let them die for want of attention; next spring he reported around that I had not sold him good colonies, etc. I have no doubt many of our queen breeders and bee dealers have suffered in the same way. If anything is worth doing at all, it is worth doing well, and the proper care of bees will pay a larger return than almost anything else. If we possibly can, brother bee-keepers, let us try to convert our slovenly brethren from the error of their ways, and if we cannot, it will be an act of mercy toward our little pets, as well as beneficial to the craft, to induce them to quit the business entirely.

Walton, Ky., March 13, 1882.

* * *

For the American Bee Journal.

A Few Practical Hints.

C. A. HATCH.

To keep one-piece sections from breaking in bending, hold as many as you can conveniently grasp, edge up, over a pail, and pour boiling water from a tea-kettle on the places which are to be bent, and be careful and not wet the rest of the piece. The strips should all be laid so the grooved sides are one way; this gives a chance for the hot water to wet both sides nicely, and only just where it is needed. The advantage over steaming or wetting the whole piece is, the dovetailed ends are not wet at all, and therefore will not loosen after being driven together, by shrinking.

Have always run my bees for extracting, and never used many sections; but prefer the one-piece to any other tried. I think they are nicer, stronger, and quicker put together; do not remember ever breaking one treated as above. A light mallet is the best tool to drive them together with.

Can fully indorse all J. W. Porter says in the BEE JOURNAL as to the age of foundation. Rather melt up after it is one year old and make over, than to use. Think the best plan to keep it would be to pack close in a covered box. Anyway, do not fasten into frames until most ready to put in the hive, and do not put in the hive until the bees are ready to go to work at it, as the heat of the hive will harden it more in one day than one month in a close pile, not exposed to the air. Too damp a place will not do; have had it mold and spoil even in a dry cellar.

To make a fair test of different kinds of foundation, it should not only be of the same age, but made of the same kind of wax. We had some nearly spoiled last year with rosin: not over ¼ ounce to the lb. of wax. The bees were sharp enough to detect even that small amount, and why not the same with other foreign substance?

I prefer moulded foundation to rolled; have never used any made on a press.

Ithaca, Wis.

For the American Bee Journal.

Bee-Keeping in Nebraska.

J. B. SKINNER.

Being a merchant and publisher my time is pretty well occupied, but with the peculiar inspiration of scientific apiculture, I am constrained to keep a few bees for pastime and experiment, as the sequel has proven a time or two, perhaps "experience" would be the better word.

This section of country (Southern Central Nebraska) is reasonably well adapted to bees, though the past season was here, as elsewhere, too dry for more than a moderate yield of honey. My bees came through last winter very much like those of many other bee-keepers, losing 100 per cent. of the total (24 colonies) attributable, of course, to the terribly severe winter—how convenient to have somewhere to place the responsibility!

In the spring another colony was procured and divided into 6 during the season, which were put into winter quarters in good order, and are yet doing well, as the unusually mild weather has given them opportunity to fly every few days, showing a strong and healthy condition.

As the country here is new, bees are scarce (I have knowledge of but 6 or 8 colonies and none nearer than ten miles of my location) hence we have discussions, and other convention proceedings, and interchange opinions, and observations, through the bee papers only, so the BEE JOURNAL, the single bee paper I am taking at present, has a pretty thorough reading here.

Reading Mr. T. C. Mace's experience with stings in the JOURNAL for Feb. 1, I was reminded of a similar experience myself during the past summer; stings usually hurt me but little, but on this occasion I had been standing in a stooping posture for some moments, causing a flow of blood to the head; the day was intensely hot, and perspiration flowed freely, when a little "pet," with "malice aforethought," injected her "beautiful, polished shaft" into the side of my nose, it was brushed away without hesitation, with no thought of more than momentary pain. Within five minutes, however, my face and mouth were so swollen that I could scarcely see or speak, a few moments later my hands and feet were swelling, and my heart palpitating so severely that much effort was required to breathe. My "better half" becoming alarmed began a liberal application of Centaur liniment, the first remedy she happened to find, and within 20 minutes after the first application, the pain and palpitation were entirely relieved, and the swelling rapidly reducing. Next day the sting was repeated on the same unfortunate organ, but without other than the usual result—momentary pain.

Inoculation proved of no avail in this first instance, but as to what spirits might have done I could not say; their value, however, is recognized in some instances, as witness the following:

A neighbor, while hauling rock some years ago, narrowly escaped being bitten by a rattle snake that lay coiled under a stone; he was very much unnerved, and after returning home, concluded to take an antidote—having purchased some spirits a few days before for making vinegar—like Mr. Mace, he imagined that it was beneficial, and deeming prevention better than cure, next morning, as he was starting to work, took another portion, and so on each day, and at the close of the season triumphantly declared that he had not been bitten once during the year; adding, half apologetically, that no vinegar was made though.

Mr. Mace might succeed equally well with it as a preventive, and thus save, not only the pain of the stings to himself, but the possible risk of death to Mr. Clarke to whom he refers, should the latter gentleman attempt to prove the question of inoculation.

Hardy, Neb.

For the American Bee Journal.

Honey from Corn.

M. MAHIN.

The correspondent of *Gleanings*, quoted in the BEE JOURNAL of March 8th is mistaken when he says that bees gather honey from corn. If he will watch the bees at work on corn tassels, as I have done perhaps hundreds of times, he will observe that they never pause on the flowers and apply their tongues to them as they do to flowers that yield honey. That the said correspondent is not a close observer is evident from the fact that he says the bees gather honey from corn at the time that they gather the dark green pollen. It is certainly not true that bees gather dark green pollen from corn. The pollen from that source is not dark green but light yellow, as anyone may observe when the corn is in bloom. Bees work on many flowers from which they never get a particle of honey, and among them are corn tassels.

Corn affords an abundance of pollen, and at a time when there are few other pollen bearing plants in bloom it is of considerable value, no doubt, as the bees work freely on it. A careful observer can always tell whether bees are gathering honey or pollen only. If they keep in constant motion, as they do on the corn flowers, they are getting no honey. I have never been able to detect bees gathering honey from soft maples, and I doubt whether they ever get any from it. If they get any it is very little.

Huntington, Ind.

For the American Bee Journal.

Practical Use of Comb Foundation.

G. W. STANLEY.

Much has been said and written on the subject of comb foundation, and yet there is room for more remarks. When Mr. C. R. Isham, of Peoria, N. Y., took that decided stand in favor of comb foundation at the Northeastern Convention some years ago, I was using foundation made on the first mill that A. I. Root ever sold. From that time to this I have produced about 20,000 lbs. of comb honey, and my bees have never been left to fill a box without a full-sized starter of comb foundation. The foundation made on the above mill was very imperfect, in comparison with work done on machines now in use, as there was but very little wall, and the foundation then used for sections did not run more than 7 square feet to the pound, and, of course, there was some "fish-bone" in the honey; but I can say that my honey has always brought high prices, which statement will be indorsed by any of the leading bee-keepers through this section, and I have never had a crate of honey come back on account of "fish-bone" or any other cause. When J. Van Deusen advertised the flat-bottomed foundation for sale, I stopped using the Root foundation in sections on account of not enough surface, and for the season of 1880 I used the Van Deusen flat-bottom, running from 8½ to 10 feet per lb. This kind worked fairly while new and fresh, if the bees were getting just enough honey for comb building, as they would then have time to change the base of the cell, and as the wall was light the wax was all used up; but when honey came with a rush, as it does in our basswood flow, the bees would add wax to the base to make it the natural shape, and thus make the base much thicker than it was when it came from the mill. Now, on the other hand, when honey was coming in very slowly, or perhaps not at all, as is the case here when no basswood, if the foundation was a little dry and old, the bees would take it out at the entrance to the hive, while a piece of natural comb in the next box would be left untouched until fall honey commenced to come in, and the natural shaped foundation would be drawn out and filled with honey. When these truths had made themselves manifest, I began to look around for a mill that would make foundation 10 square feet per lb., with natural shaped base, and found what I wanted in the Vandervort mill for making light foundation. If the work is properly and carefully done on this mill, the foundation will run 10 square feet per lb.. and the base will be very thin and even, not leaving one part of the septum thicker than the other two parts, as you will observe in most other foundation, and at the same time the wall will be very thin and sharp, so that if honey came with a rush you will not get a chunk of wax in the center of each comb, as the base is as thin as the bees would have made it.

In speaking of brood-comb foundation I will be very brief, as nearly all bee-keepers are convinced of the necessity of it in order to get straight combs and to exclude drone comb, to say nothing of the great saving of time and honey that the bees would use in making their own comb. If foundation has a high wall, of the proper shape and weight, so that with a rather light base the foundation will run about 5 feet per lb., there will be no trouble from sagging. In my opinion, if this fact had been known 3 years ago, wired foundation would not have been used to any extent, as the wires made it much more expensive, besides being constantly in the way of taking out queen cells, etc. What first raised the complaint of foundation sagging in the brood chamber was the fact that it was made about 6 or 6½ feet per lb., and the wax was about all in the base, but the high-walled mill now obviates that difficulty, if proper care is taken in fastening the foundation in the frames.

Wyoming, N. Y.

For the American Bee Journal.

The Temperature of Cellars.

JACOB SPENCE.

I have been watching the BEE JOURNAL to see more particularly brought up the question (and answer to the question) whether indoor even temperature is really desirable or not. It seems to me more reasonable to believe, as the normal condition of bees wintering in hollow trees would be alternating sunshine and frost, that in bee-house or cellar they should, too, have such variations of temperature as would give them a chance to move and again compel them to cluster?

I value much to have a competent bee-keeper's opinion or judgment—at same time greatly prefer good reason given or well conducted experiment in support of consistent theory. I would vastly like also that we could have a well sifted and selected list of just how many things are undisputed in regard to wintering, if any? Or if not undisputed, at least generally accepted as essentials, toward bringing the creatures through with life. This looks to me where the dead-lock yet comes in. But surely the combined wisdom and experience now available, ought to be competent to clear away the mist yet around the dominion of wintering.

Toronto, Canada.

For the American Bee Journal.

Untested or "Dollar" Queens.

W. Z. HUTCHINSON.

MR. EDITOR: You say that scores of prudent breeders would, in some particulars, exceed the expenses as given in Rev. A. Salisbury's balance-sheet; if not too much trouble, give the details, showing in what particulars a prudent breeder could be more extravagant?

You speak of breeders making a specialty of tested queens, and availing themselves of the "untested" feature to work off worthless trash in filling orders for tested queens, provided, that the "worthless trash" produced bees with the requisite number of "stripes." I believe that some of our apiarists are waking up to the fact that the worst fault of a queen is not always that she produces hybrids.

You say: "We have long been convinced that 'waranted' or 'untested' queens were not only worthless, but an actual damage to the bee-keeping interest. In reply to this let me ask a question: Suppose that, about July 1st, any of our most reliable breeders had 100 queens that had just commenced to lay. (I know of only one breeder who rears his "dollar" queens differently from his tested queens, and that is Mr. Doolittle. He very explicitly states the fact in his circular, and I honor him for it.) If from such reliable breeder I should order 30 "dollar" or untested queens, and 30 of these young queens should be sent me; in ten days more I should order 30 "tested" queens, and, of the 40 remaining queens, 30 had been found to be purely mated, and they should be sent to me; now, Mr. Editor, which lot of queens do you think would be the best. I could destroy the mismated queens, or, if I chose to keep them, would they not produce as good honey gatherers as the purely mated queen? But, you say the breeder can send out, as dollar queens, the ten hybrid queens that he has left. Granted; but the breeder who would do this would also send out superannuated and worthless queens, when filling orders for tested queens, if he had any such queens that produced three banded bees.

You say: "That it (the cheap queen traffic) does open a wide door for fraud no one can deny." A queen whose progeny shows the three yellow bands is sold as a tested queen, does not this also open a wide door for fraud? Suppose that the Ohio dealer had ordered 100 tested queens, and suppose further, that he had stipulated that they should be young queens and bred from an imported mother, if that western apiarist and queen breeder had seen fit to do so, could he not have filled the order with old or "culled" queens? In regard to these "sharp" breeders, who never miss an opportunity to send out old and worthless queens, isn't it a trifle strange that their names are never given to the public along with their boasts and "chuckles" over their dishonorable practices? In my opinion an honest man is honest at all times, and under all circumstances, while a breeder that would cheat the purchaser of a "dollar" queen, would not hesitate to defraud a customer that ordered a tested queen.

Again you say: "But we do not believe, among them all, there is one who is reckless enough to expect to buy a single queen for $1 or 100 queens for $65 which would be fit to rear even untested queens from." Please turn to page 169 of the *Bee-Keeper's Exchange* for 1881, and you will find that H. P. Sayles writes as follows: "As an illustration of American untested queens, I will say I received 5 strong nuclei from Dr. Brown, of Georgia, price $3 each. All the queens were superior in appearance. Of the untested queens above mentioned, one proved to be impurely mated. From two I reared a few queens which proved beauties in all respects, and but for the fact that their mothers cost but $1 each, they would delight the eyes and fill the hives of our customers next season. As it is, they must remain and do service at home. Such experiences as the above, produce the call for the American bee. From my experiments, I should certainly prefer the dollar American from one of our reliable breeders, for breeding or any other purpose, to the untested imported queen."

I have purchased quite a number of both tested and untested queens, and I have found fully as large a proportion of good queens among the untested as among the tested, and I presume that other purchasers have had the same experience. Untested queens are shipped as soon as they commence laying, before the breeder knows anything in regard to their qualities, while tested queens are kept at least three weeks, and, if the breeder chooses to do so, he can keep, for his own use, the very best among them, leaving the second class queens to be shipped as "tested" queens.

I cordially agree with you, Mr. Newman, when you say: "What bee-keepers want is better stock, more honey, longer lived bees, and certain profits;" but I firmly believe that these results will never be obtained by testing queens in regard to "stripes;" and I am glad to see such men as Heddon, Alley, and Doolittle take the position that they have. If ever I felt like saying "amen," it was when I read the following, in Mr. Alley's article: "Queens should be reared and tested for business, and not for purity. In ordering queens the purchaser should say: 'Please send me a queen that you know to be very prolific, active, and vigorous; let her be pure Italian if possible, but send me a good one or none, as I want to obtain honey.'"

Mr. Alley says that he has more orders for queens than he can possibly fill, and yet he finds the rearing of dollar queens unprofitable. It would hardly seem proper for a young bee-keeper, like myself, to give advice to an old hand like Mr. Alley, but I presume that I may be allowed to suggest that he follow the course adopted a year or two ago, by Mr.

Oatman, of Ill., i. e., drop the dollar queen business altogether, and sell nothing but tested queens. He could thus continue in the business that has become "second nature to him," and could also make money.

Rogersville, Mich.

CORRECTION: About the middle of the second column, page 149, is a sentence that commences as follows: "I, at one time, had nuclei." It should read: "I, at one time, had eighty nuclei." W. Z. H.

[A reply to the above may be found on the first page.—ED.]

For the American Bee Journal.

Does it Pay to Rear Cheap Queens?

REV. A. SALISBURY.

It does seem to me almost any one can observe, that the advocates of untested queens rely but little upon their own arguments, as proof that the business is remunerative. Mr. Hutchinson asks the question, on page 149 of the BEE JOURNAL: "Mr. S., I ask if you have not indulged in too many spread eagle advertisements?" He also informs us when the flow of honey is scarce, he feeds cheap food—"It was grape sugar that I used for feeding." Of course, Mr. H. is not a sloven or stingy, that he does not like to see a neat advertisement, but economy says, "can't afford it on dollar queens." The same is also true of grape sugar (glucose). He knows, as well as any of us (from reports made on glucose), it is inferior and unhealthy food, compared with good granulated or coffee A sugar, or honey; but economy says take the dose—economy with Mr. H., and likely money in *his* pocket, but hard on the constitutions of embryo queens. If the reader will take the trouble to turn to Mr. H.'s article he will see, to make a good showing on untested queens, that Mr. H. puts all his increase of colonies at $7 each, and all his surplus honey at 15 cents per pound. To me that is a new leaf just turned. He also acknowledges in that report that he allowed his expert nothing for time spent in rearing the queens; and it is altogether probable he boarded himself. A weak showing for an honorable, remunerative business.

Mr. A. G. Hill, editor of the *Bee-Keepers' Guide*, (once if not now an advocate of dollar queens), in the sequel of his review of the article referred to in the BEE JOURNAL, says: "And even with our economy and improvements, we can hardly make the price of a suit of clothes more than Mr. Salisbury." My balance sheet fell short $12. This looks to me like a very small business—half a suit of clothes for a season's labor (don't forget the $12 discrepancy in my balance sheet comes out of Mr. Hill's suit, which leaves him with half a suit, if he intended a $24 suit). He evidently felt it was a poor showing for a remunerative business. It may do for a man of leisure, or boys that have nothing else to do, but preposterous for a man of experience, with a family to maintain and children to educate.

It is true that the cheap queen traffic opens a wide door for fraud upon the purchaser. The presumable harm it has already done, yet doubtless largely lies cloaked behind the curtain. Like the glucose trade, it was a fraud in the beginning, which drove honest houses out of the sugar trade, and supplied the public with an inferior, unhealthy article as a substitute. Notwithstanding this may be the case in our business, it does not necessarily follow that all queens sold for untested are a fraud upon the purchaser. All tested queens come from those once untested. The truth in a nutshell is, first, it presents a strong temptation to the queen-breeder; second, he cannot make an honorable living dependent upon selling "dollar queens," and last, the purchaser runs a risk in getting a good queen.

While it is a fact, that all honest dealers discard and destroy all queens that present any external appearance of imperfection, yet imperfections are sometimes concealed from the eye, and after a queen has been tested, however valuable the mother and fine the stock, she is found not to be worth hive room, and no one to blame—it is the sporting of nature.

Camargo, Ill.

For the American Bee Journal.

Is Our Chemist Abroad?

J. H. MARTIN.

While reading your editorial, page 66, upon granulating glucose, I became disagreeably conscious that our chemist is not abroad with eyes and ears open, to learn the wondrous progress of the present age, and to keep the bee-keeping industry upon an even race with other and recently discovered industries. Here we have an industry and a product, the history of which we can trace back through the ages, that has not in its chemical features progressed one step. The honey that is put upon our tables, in the comb or liquid, is just the same as when Samson ate the comb honey from the lion's carcass, and lapped the extracted honey from his fingers.

But I hear some one say: My dear sir, what do you propose to do with our beautiful honey, are you not satisfied with the pure, wholesome, clean article, as now put upon the market? In answer, I may say: I am not; for I know there is a wide field here for improvement.

The first improvement I would suggest, is to bleach or extract the coloring matter from our dark grades of honey. Buckwheat honey seems to be the best subject to commence upon and I would inform our chemist, that a fortune awaits him, as soon as he will present to us the magic filter that will remove the disagreeable color, and give us a nearly uniform grade of honey. I think the proper time to attack the color is when the honey is first gathered and before it is sealed.

My next suggestion is to dry granulate our honey. That it can be done is hinted to us very strongly by dame nature herself, for every bee-keeper who has handled extracted honey, knows that small patches of honey upon the staves of the barrel will often be found in an apparently granulated condition so that it can be handled like dry sugar. Will our chemist tell us why these particular parts dry, and also tell us how to serve the whole barrel in like manner? The only experiment I can recall, that has been tried upon this problem, was by Mr. A. I. Root, several years ago. This peculiarity of certain grades of honey came to his notice and several parcels of candied honey were hung up in wire baskets, to dry, but I think the experiment was a total failure.

I could give other suggestions for improvements, as to the use of honey, but will leave the subject for our chemist to give us much needed information upon the chemical constituents of honey, the coloring matter, and the flavor.

The glucose industry, not a score of years old, has passed from one stage of improvement to another until a substance hard and bitter, and loaded with acids, is now to be put upon the market, with the bitterness eliminated and in granulated form; and although used as an adulterant in all other sweets, the spirit of improvement, which posesses the manufacturer is worthy of imitation by the bee-keeping fraternity.

Unless our chemist gets around lively, he will be left so far behind he will never win his share of the laurels of renown.

Hartford, N. Y.

For the American Bee Journal.

Manufacture of Comb Honey.

H. S. HACKMAN.

MR. EDITOR:—I thank you for the kind notice given to my last communication on Honey in Sections. Hoping it will not be intruding on your good nature, by my again calling the attention of the first question, "Do people in large cities buy and use our beautiful section honey, and at the same time think they are using or eating artificial comb honey?" I think they do.

It was not my aim to prove or disprove the possibility or impossibility of making artificial comb honey, for that is a settled fact with me—it has not yet been done. But to prove to my honey producing friends that pure matured honey is bought and used largely by consumers, under the impression that it is manufactured honey. This false impression is partly brought about by unprincipled, over-anxious men in producing something new and novel.

I had the following conversation with one of our grain merchants some 2 years ago, which will partly explain my assertions. He said: "I saw a nice lot of comb honey at the Exposition building in Chicago, and so much of it, you would be surprised; and it is made in Chicago."

"That is not so; for no one can make comb honey."

"They do make it, comb and all, for the man that had it on exhibition told me so, and I afterwards saw the place where they make it. I saw an immense pile in their show window."

But he had forgotten the street and number, so I could not trace the matter up.

Another reason why I am convinced of the above fact, is that while I have sold my honey from house to house, many people would look at the sections, turn them over and over, again and again, in the most surprising manner, and then ask: "Is this the way you put up comb honey?" I told them no; that the bees made it that way; that the bees gathered the honey always. Some seemed doubtful.

One more strong evidence: My friend who ate the artificial comb honey at his sister's table in Chicago, promised to send me a sample of it when he got back to the city, but the sample has not come to hand, and I have no doubt but that he found the honey he had eaten for artificial honey was the pure article, for it is two months since he was here.

Honey taken from bee-trees, log gums, box hives, and promiscously thrown into tubs and carried to market, is so different from our nice clean sections of to-day, people can hardly realize the fact that our nice honey in sections is pure.

Section honey in country places is something new. Many people have never seen any. Producers always ship their best honey to the city markets, and the above statement explains the mistaken idea among city consumers. This false idea is detrimental to honey producing, but how can we remedy it?

Peru, Ill.

* * *

For the American Bee Journal.

"Do Bees Puncture Grapes?"

A. F. MOON.

The members of the Northeastern Convention, which recently held its annual session, very wisely discussed this question; much credit is due them, for a just and "wise decision."

For thousands of years the honey bee has been a companion of man, in the way of supplying him with the grandest luxury ever placed before an epicure. Bees have greatly aided in the fructifying of fruit in carrying pollen from "flower to flower;" it is needless to give the manner in which they were cultivated, and managed in olden times, but we will say that within the last thirty years, "came the promise of deliverance—the foreshadowing of the beginning of great things"—and that foreshadowing was the introduction of movable frame hives. Up to that period but little interest, comparatively, had been manifested, "except by a few, knowing the worth of this noble insect." Latterly came more important inventions, such as the honey and wax extractors, comb foundation machines and other valuable inventions, which gave this rural branch an impetus never before excelled in any country. All this has had the effect to place this commodity in proper shape to meet the approval of other nations who are striving to compete with America. While this great revolution has been going on, the little busy bees has, like the gigantic railroad system, spread far and wide, notwithstanding their great enemy, which is the worst of all, "the ignorance of man;" they have contrived to increase and emigrate to the far west. They have crossed the Mississippi, making their way westward until the Rocky Mountains are no longer their boundaries. Yes, this wonderful insect has pushed its way onward over the mountains and the plains, passing Dakoto, Nebraska, Colorado, Wyoming, Montana, Utah, Nevada, Idaho, Oregon, and the far Washington Territory; their march has been westward, and mostly in advance of the human family.

The wonderful growth in apiculture during the last 30 years has far excelled any thing in the world's history. The revenue derived from the bee excels any other branch of industry for the capital invested, and their nature and habits have become familiar to almost every school boy. Notwithstanding their long existence upon the earth, we have a class of men who are trying to banish them from the land by accusing them of "puncturing grapes, peaches and other fruit." How strange it is that the honey bee has been cultivated for so long a period and never learned until a few years how to open and suck the juice of fruit!

When this complaint was first made we had the curiosity to test it, although we had kept a large lot of both bees and grapes, yet never knew of any injury done to grapes, peaches or any fruit by them.

We selected from the Delaware, which, by the way, is one of the most tender of all varieties, placing them in an empty hive, and putting a colony of bees in the hive, but not a grape was punctured, but the bees died. I have frequently placed a bunch of grapes in front of a hive of bees when but little or no honey could be gathered, and have covered them with syrup; they would lick up the syrup but did not destroy the grapes, neither do we believe they can. If they possessed the power they would undoubtedly use it long ago, for they have been raised together, and we do not think the bees possess any more knowledge to-day than they did when first known to man. They have not changed—they work by the same rule, and are governed by the same law now, that they were 2,000 years ago.

It is somewhat astonishing to look upon the most refined and intelligent communities of modern times and behold the ignorance that still exists, and where knowledge should prevail. the ignorance of merely fashionable training are twins—Gog and Ma-gog.

If the question is to be settled whether bees puncture grapes, we hope that practical disinterested men will be chosen; some great blunders have been made by those who claim to be practical scientists, which has caused the little bee to lose much of its character. A few years ago a man in New York tried to expel bees from the place because the bees sucked honey from his buckwheat.

Rome, Ga.

SELECTIONS FROM OUR LETTER BOX

Honey from Cotton.—My bees are doing well, gathering some honey, and are breeding up very fast. Maple, peach and plum trees are in full bloom; the weather is warm, and the little fellows are busy all day. I have 32 colonies, all in good condition. I have them all in movable frame hives; I would have no other. I use full sheets of Dunham foundation, and find the bees work on it readily. There is no other person in this locality using the frame hive, nor is there any Italian bees except my own. It is thought bees will not pay in this country, but I am going to give them a fair trial this year. I saw drones flying on March 12. I shall begin queen-rearing soon, and expect to breed some fine queens for my own use. I took last season as high as 80 lbs. of honey from one hive, made from cotton bloom. I send you a sample. I want to know how it will compare with white clover honey. The sample is not a fair one, as it was not extracted. It was strained from the comb. H. M. WILLIAMS, M. D.

Bowden, Ga., March 13, 1882.

[The sample came duly; but it is not as light, nor as pleasant to the taste as white clover.—ED.]

Foundation Fastener.—Is Goodrich's machine, intended to fasten foundation in frames not wired? If so, will the sheets of foundation have to be but the whole size of frame? I should like to buy a machine that would fasten whole sheets of foundation in frames, that will not warp or stretch, when the bees commence to work on it. HENRY FILLEY.

Castle Hill, Me.

[The foundation should be full size of frame—and may be wired or not.—ED.]

Coral Berry Bush.—The coral berry bush grows wild here on hundreds of acres. It commences to bloom in August, and blossoms till late frost. Drouth does not effect it, and it is better than white clover. I have been observing it for 4 years, and find it grows anywhere, either on high or low land. It can be easily plowed out with a good team. J. E. SAMPLE.

Beman, Kan.

[We have several specimens, which have been sent from others.—ED.]

The Uses of Glucose.—Mr. Editor: I think you are mistaken in your opinion about the uses of glucose—that its only use is to adulterate. The grocers of the country sell large quantities of a fine looking syrup in 5 and 10 gallon kegs, which is, I think, the genuine glucose. They call it down here "corn syrup," and do not pretend it is anything else. It retails at 65 cents per gallon. It is very clear, light color, transparent, with, to me, a sickish sweet taste. Most people are fond of it, many preferring it to the best sorghum syrups, and paying for it a higher price. It is utterly worthless for cooking purposes, and known to be so by the consumers. It is used only as a table syrup, and will be found in almost every house. Of course, the great mass of the people are ignorant of its true character, and believe it harmless and wholesome. There is only now and then a person who knows it to be worthless and unhealthy and who will not have it in their house. D. P. Norton.
Council Grove, Kan.

[Being ignorant of its real character the people use it, but if they knew what they were eating, they would never think of using it. Is it not, therefore, a fraud and a snare, detrimental alike to health and life? And should its real character not be exposed in the interest of common humanity?—Ed.]

Drouth in Kansas.—Bees did well in this locality until the commencement of the basswood flow, after which they barely gathered sufficient for brood rearing, the drouth being continuous the entire season. As a consequence many colonies died of starvation, and are generally in a weak condition. John Y. Detwiler.
Doniphan, Kan.

Syrian Bees.—I will give my experience with the Syrian bees, as I see that Messrs. Pike and Valentine have each given theirs. I do not rear nuclei for sale, therefore have no axe to grind. When Mr. Jones first imported the Syrians, in 1880, I purchased 8 queens, having but 9 colonies at the time, which made 8 colonies of Syrians and 1 of Italians, that fall. The winter of 1880-81 killed nearly all the bees in this part of the country, but 6 of my Syrians came out in good condition, having lost the Italians and the 2 weakest of the Syrians. The season of 1881 was a very poor season for honey, so all the bee-keepers say here, but my 6 colonies increased by natural swarming to 24, which are all in good condition at the present time, besides getting more surplus honey than Italians ever did for me. I find the Syrians splendid honey gatherers, working early and late; mine carry heavy loads of honey, and lots of them. Last fall, when I prepared my bees for winter, I found nearly every colony had twice as much honey as they needed to winter on, having the brood chamber full, with the exception of about 2 combs, which were about half full of brood. I can handle my bees without gloves or veil, and not get stung any more than with the Italians. Give me the Syrian bee every time, even if the Marylanders have better ones. Lizzy Hartman.
South West, Ind.

Sweet Clover with Wheat.—Can I seed a piece of winter wheat this spring with sweet clover, without injury to the wheat, and the clover do as well as other clovers sown on winter wheat in the spring? We seed winter wheat in this country generally in the spring with clovers and timothy, and they do well. Bees are doing well in this locality. March 2d my bees brought in pollen. I have 75 colonies packed in chaff on their summer stands. We have had a very mild winter so far. Eli Brooks, Jr.
Center Road Station, Pa.

[Certainly; the growth of the sweet clover will be so slow the first season that the wheat will get out of its way, and the clover will take no harm from the wheat.—Ed.]

Red Clover Queens and Bees.—Much is said about red clover queens, or queens that will produce worker bees that will gather honey from red clover, but I don't see anything strange about having such queens. My bees gather honey from the first and second bloom every season. Some seasons they gather half of my crop of honey from red clover. Every queen in my two apiaries will produce worker bees that will gather honey from the first bloom of red clover in Western Maryland. D. A. Pike.
Smithsburg, Md.

Kentucky Bees All Right.—I send the glorious news of a safe passage, without the loss of 1 colony out of 28. Last winter I lost 21 out of 33. Bees have been bringing in pollen for 2 weeks. On the 9th of March I noticed a number of peach trees in bloom nearly opened to full size. I opened some colonies on the 5th of March, and found young bees capped, brood and eggs, all in abundance. One had some drone brood capped. At this rate, I expect swarming to commence early in April. The Bee Journal improves all the time.
G. W. Ashby.
Valley Station, Ky.

Bees in Better Condition than for Many Years.—One year ago I lost all my bees except 3 colonies. I had nearly 50 colonies. I have just bought 7 more good strong colonies. Bees are in better condition this spring than they have been for many years.
W. G. Porter.
Weston, Mich., Feb. 9, 1882.

The Outlook the Best for Years.—Our bees have wintered well, and are now gathering honey fast. The outlook is the best for years.
W. K. Marshall.
Marshall, Texas, March 16, 1882.

A Veteran Bee-Keeper. — I commenced bee-keeping when 18 years old; and have kept bees since. I am now 74 years old; was born in North Wales in 1807, and came to America in 1832. I have taken much pleasure in working in the apiary, and have made it pay very well some years. Please tell me what are Albino bees?
Wm. Roberts,
Vaughansville, O.

[We believe they are the result of carefully breeding the lighter strains of Italians, until their peculiarities have become a fixity.—Ed.]

Feeding Syrups.—I wish to inquire if the syrup which has a soda or potash taste is fit to be used to feed my 10 colonies to induce early swarming? Our grocers call it clover honey syrup. It has an abominable taste when eaten on warm cakes. C. M. Clark.
Lincolnsville, Pa.

[Clover honey syrup is probably only another name for glucose or grape sugar. Do not feed your bees on anything you would be unwilling to eat yourself, unless it be something you know to be a natural production. Better mix honey with warm water, or make a syrup of pure cane sugar. —Ed.]

Experimental Wintering.—I am trying to winter my bees by three different methods in order that I may solve the winter problem; 33 are packed in chaff, which are wintering finely, and they have had several good flights; two I placed in the cellar on Nov. 22, and are doing well; 58 are buried in the ground. I shall be unable to ascertain their condition until I take them out. Should you want to know the result of the three different methods, I will inform you by the 1st of May. Many are anxious about the burying process, and are coming several miles when I take them out. I think of sowing an acre of mammoth mignonette, together with sweet clover. I like the present form of the Bee Journal much better than last year. I value it more and more every day. G. H. Adams.
North Nassau, N. Y.

[By all means, give the public the result or your experiments, and the conclusions you arrive at.—Ed.]

Bees in Kansas.—Bees have wintered finely in this region. I know only of three colonies having perished during the past winter, and they were weak and died from starvation. A little care would have saved them.
J. W. Margrave.
Hiawatha, Kan., March 14, 1882.

Lost One out of Fifty-three.—Bees have come through the winter well, so far. I have lost 1 out of 53, but the bees went up into the upper story and starved on empty combs during the first cold spell. John F. Fry.
Ronceverte, W. Va., March 10, 1882.

Clipping Queen's Wing.—Is it a good plan to clip the queen's wing to prevent the bees going off; and if clipped, how far from the hive will they go generally, when the hive is close to the ground, and where would the bees cluster? Would they find her on the ground or return to the hive? I put my bees in the cellar on Nov. 11, the temperature of which has been very regular at 42° since, with one thickness of cotton over the frames and no cover on, and they have had no flight except 1 colony that became uneasy. I gave those a flight in the shop, as I could not do so out-of-doors. I found them very strong with plenty of honey, and brood, in all stages on 4 combs, and about 2 quarts of bees behind the division board. I gave them more room, and returned them to the cellar. I intend letting the balance alone, unless they get uneasy. Is that a good or bad record?

Wm. A. Pearson.

Lacolle, Queb., March 6, 1882.

[If you cannot give your bees constant attention, it is a good plan to clip the queen's wing, then when the bees swarm out she will get but a few feet from the hive when the bees, discovering her helplessness will some of them cluster on her on the ground, while the others will mostly return to the hive from whence they emerged; some may go into other hives. Should you find her on the ground, destroy the queen cells in the hive and return her. Your record is good, but with so much breeding going on they will soon get uneasy, and be better out-of-doors.—Ed.]

A Reversible Frame.—I am using a simple invention by which any square frame can be reversed, or either side turned up or down in an instant, also any other frame having square corners, such as the Langstroth, can be reversed immediately. This is of great advantage where bees are inclined to store honey along the top bar. I would like to hear from you and others on this point. My bees are in excellent condition. One colony has about 8 or 10 square inches of drone brood capped over, and five frames of brood mostly capped. I fear the present "cold snap" may destroy some of the brood. I, like Mr. Alley, am glad to see the "dollar" queen question brought up. From my experience I am satisfied that it will not pay to rear queens for $1, nor to "warrant" a queen for $1.50. Although I think your classing warranted queens with untested as equally worthless, is hardly fair; at least the warrant I give them, for they should be not only warranted to be pure, but prolific and good queens in every respect, but they cannot be reared for less than $2. I hope this question will be agitated until buyers will see that it is to their interest to pay a reasonable price for a good queen, tested not only for purity but business. L. C. McFatridge.

Carroll, Ind., March 13, 1882.

Foundation Holder.—I send you a frame ready to put the foundation in, with a frame to hold it. A piece is sawed out of the top-bar, beveled a little; turn that piece the other side up and that brings the two sharp edges together, by looking at the end of the top bar you can see; I have left one end piece off so that you can see how it will take hold of the foundation. I have tacked the frame to the board so that it will not rattle around in shipping, loosen the frame from the board by drawing the tacks, then take off the bevel piece; lay on the foundation, put the bevel piece on the top of the foundation; crowd the piece down sufficiently to hold the foundation; put in two or three tacks and then you have it fast, and if you ever want to cut the old comb out and put in new, take off this piece, put in your foundation and tack it back, and it is all right. It is but little work to make the top bars of the frame like this, for every one keeping bees has, or ought to have, one of Barnes' foot power saws. H. W. Conklin.

Rockton, Ill.

[The implement is an ingenious contrivance for holding the frame firmly, and the foundation straight, while tacking the strip to the top-bar to hold the foundation.—Ed.]

How I Bind the Bee Journal.—Having adopted a cheap plan of binding the Bee Journal, I will give its readers the benefit of it. I take it for granted that every subscriber is keeping all the numbers on file. I use two strips of leather 6 inches long by ½ inch wide, and cut 2 holes in each near the fold at the edge of the paper. I cut holes in the paper and insert in each a shoe lacer; as soon as a number is received it is filed, and at the end of the year they are all bound at a cost of 1 cent. Bee-keepers of Connecticut, let us organize a State Society. I will put my name on the roll.

Fred. Offinger.

Stamford, Conn.

What a Contrast.—Last spring we were all lamenting for the dead bees, ready to exclaim, put me in the list of "blasted hopers." This spring we are all rejoicing, thinking, when we send in our report next fall, it will be a "whopper." Judging from the present condition of my bees, they will swarm early in April. What a contrast from last spring! When I put my bees into winter quarters on Nov. 10, I weighed each of the 50 hives, the total weight being 3,100 lbs., making an average of 62 lbs. each. On March 1st I weighed them again, the figures being 2,750 lbs., making an average of 55 lbs. each, the average consumption being but 7 lbs. per colony. Who would have thought a hive of bees could have lived 110 days on 7 lbs. of honey? Hardly an ounce per day; and all are on summer stands at that. Who wouldn't be a bee-man? I wouldn't give my bees and fancy poultry for a little gold mine.

J. F. Kight.

Poseyville, Ind., March 13, 1882.

Profits for One Year.—For several years I have run a farm and apiary together. Last year I had my farm worked on shares, and gave my time and attention to the bees with the following result: Commenced the season of 1881 with 72 colonies; increased by natural swarming to 120; have sold 7,422 lbs. of comb and 749 lbs. of extracted honey, for which I received $995.06; my expenses were $118.70, which leaves $876.36 for my work. I had empty hives and honey racks left from 1880. I would advise those who think of sowing sweet clover for hay to try a little at first, as it makes pretty coarse hay; but is one of the best of honey plants. There are two kinds—white and yellow blosson; the white yields very white honey. W. S. Ward.

Fuller's Station, N. Y.

[The white sweet clover (*Melilotus alba*) is what is wanted by bee-keepers. The yellow blooms 2 to 3 weeks earlier than the white, but we have never seen a bee working on it, either for honey or pollen. However, we had but a few stalks of it on trial, and, of course, this was not a satisfactory proof, as bees will frequently neglect a few stalks of even the best honey plant, to work on more profuse bloom of some other and not so good a kind. We destroyed the yellow-flowered sweet clover before it went to seed. —Ed.]

The Winter in Nebraska.—After celebrating Christmas, while "on the wing," my bees were confined by colder weather till Feb. 2, when the thermometer went up to 54° Fahr. in the shade, and my bees had a good flight again. Since then they were out on the following days: Feb. 3, thermometer 60° F. in the shade; Feb. 5, 64°; Feb. 6, 74°; Feb. 9, 57°; Feb. 10, 62°; Feb. 11, 60°; Feb. 15, 70°; Feb. 25, 60°; Feb. 26, 60°. The lowest dip we had Feb. 18 and 19, when the thermometer stood at sunrise at 2° below zero, and on the 20th and 21st we had a snowfall of about 12 inches on the level, with thermometer 2° F. below zero. So far my bees are in a good condition, and fly but little even on very nice days, although they are strong and healthy.

Wm. Stolley.

Grand Island, Neb. 28, 1882.

Doing Well.—Our bees are doing well; they gathered pollen on March 3d from soft maple. I will try and give you my report next fall. I have 7 colonies, increased from 2 last year, and intend to work one for honey to see what they can do with my help, and the rest I shall run for increase.

Morris Rossiter.

Sunbury, Pa.

Bees Feeding on Pudding and Molasses.—I wish to say to Mr. Heddon that I think his experiment proves that bees will not winter well on "pudding and molasses," for after sucking out all the molasses they can reach, on the pudding they will starve.

DR. E. B. SOUTHWICK.
Mendon, Mich., March 14, 1882.

How to Sow Catnip.—Please give the best way to cultivate catnip for bee pasturage—whether to sow in drills or broad-cast? I wish to sow from three to five acres, or more. Please give the particulars in the columns of the BEE JOURNAL.

T. S. ROYS.

[Plant in beds or drills, and transplant; or sow broad-cast, where it is permanently to remain.—ED.]

Dimensions of a Two-Pound Can.—Please give the dimensions of a round tin vessel which will hold just two pounds of honey? By answering through the BEE JOURNAL you will confer a favor.

MARSHAL STONEHOUSE.
Shirley, Ont.

[We cannot give the dimensions for *just* two pounds of honey, as there is a slight difference in weight; however, a round vessel 4 inches in diameter by 4 deep will about fill the requirement, allowing a little room for expansion in heating, while liquefying the honey from granulation.—ED.]

Profits $25 Per Colony.—My profits in 1881 were $25 per colony. My 4 colonies wintered without loss. I thank the BEE JOURNAL and Cook's Manual for all my success. I could not afford to do without either of them.

CHARLES MITCHELL.
Molesworth, Ont.

Molding Combs.—I have 3 colonies packed in a large box with chaff. They sweat so much that the combs and honey get moldy; otherwise they have wintered well. What can I do to prevent it? So far there are but very few dead bees. In the winter of 1881 I had 5 colonies; but they all died on account of mold and dysentery.

JACOB BOWER.
Dry Valley, Pa., March 8, 1882.

[Take the cover off your packing-box, remove all the upper packing, let the sun shine on the blankets till the moisture is evaporated from the hive, then replace the cover on the box, without replacing the packing over the bees, or, at most, with but loose hay or straw above them; then bore 1½ inch holes in front and rear of the upper part of the packing-box, to allow the escape of the moisture which may pass through the straw.—ED.]

☞ The spring meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., May 9th, 1882. M. C. BEAN, *Secy.*

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

April 1—Barren Co., Ky., at Sinking Spring, Ky.
11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.
19, 20—Tuscarawas and Muskingum Valley, at Coshocton, O.
J. A. Bucklew, Sec., Clarks, O.
25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.
26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.
27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.
May 2, 3—Eastern N. Y. Union, at Cobleskill, N. Y.
C. Quackenbush, Sec., Barnesville, N. Y.
11—Champlain Valley, at Middlebury, Vt.
T. Brookins, Sec., East Shoreham, Vt.
16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.
25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

☞ The Central Michigan Bee-Keepers' Association will meet April 20, at Lansing, in the Capitol building. Programme.—President's annual address, Rev. J. Ashworth; bee hives and fixtures, E. W. Wood; Cyprian bees, J. Harper; the coming bee, Prof. A. J. Cook; care of old combs, Stephen C. Perry.

REV. J. ASHWORTH, *Pres.*

☞ The Champlain Valley Bee-Keepers' Association will hold their semi-annual meeting at Middlebury, Vt., May 11, 1882. T. BROOKINS, *Sec.*

☞ The Texas State Bee-Keepers' Convention will hold its meeting at Judge W. H. Andrews' Apiary, at McKinney, Texas, April 25, 1882.

WM. R. HOWARD, *Sec.*

☞ The spring meeting of the Mahoning Valley Bee-Keepers' Association, will be held at Berlin Center, Mahoning Co., Ohio, in the Town Hall, on Saturday, March 25, at 1 p. m., sharp. All interested in the science of apiculture are invited to be present and participate in the discussions of the day. The following questions will be discussed: "The merits of the different races of bees." "The best method of securing surplus honey." "Which is most profitable to the bee-keeper, comb or extracted honey?" An essay on pasturage or forage for bees will be given.

LEONIDAS CARSON, *Pres.*

☞ The semi-annual meeting of the Tuscarawas and Muskingum Valley Bee-Keepers' Convention, will be held in the Town Hall at Coshocton, O., on April 19 and 20, commencing at 10 a. m. A cordial invitation is extended to bee-keepers everywhere.

J. A. BUCKLEW, *Sec.*, Clarks, O.

☞ The Barren County Bee-Keepers' Association meets at Sinking Spring school house, three miles west in Glasgow, Ky., on the first Saturday of April, 1882. All bee-keepers of the county are invited.

I. N. GREER, President.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., March 20, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 8c. for dark and 10c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 22c. for good yellow wax, on arrival; 18@20c. for medium grade, and 15@17c. for dark.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

HONEY—The retail demand for extracted, in small packages, is fair, but only an occasional barrel is sold for manufacturing purposes. It brings 7@11c. on arrival. Demand for comb honey is only in a retail way, and only choice white is salable. It would bring 20c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb honey is very scarce and commands 22@25c. per pound. Other grades, partly dark and dark are very slow sale. Extracted firm at 9@12c., according to quality and style of package.

R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—There is a liberal supply of honey here for which trade is very little demand, and prices rule weak and irregular.

We quote as follows: White comb, in small boxes, 18@19c; dark, in small boxes, 12@14c. Extracted, white, 10@11c.; dark, 7@9c.

BEESWAX.—Prime quality, 21@23c.

THORN & CO., 11 and 13 Devoe avenue.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—The market remains unchanged; 1 and 2 lb. sections, of best white, sell readily at 21@22c.; glassed white, 16@17c.; buckwheat very dull at 15@16c. for unglassed. Extracted, small packages, 12c.; large packages, 11c. per lb.

BEESWAX—Scarce at 25@30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—There is an entire absence of demand. Stocks are not large, but holders are anxious to clean up.

We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8¾@10c.; dark and candied, 7@8c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dull and lower to sell; season about over. Strained offered at 8c. and unsold. Comb quotably in fair demand at 18@22c.

BEESWAX—Stiff at 20@21c. for prime.

R. C. GREER & CO., 117 N. Main Street.

THE AMERICAN BEE JOURNAL

RATES FOR ADVERTISING.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance :

For **4** weeks		**10**	per cent. discount.
" **8** "		**20**	" "
" **13** "	(3 months)	**30**	" "
" **26** "	(6 months)	**40**	" "
" **39** "	(9 months)	**50**	" "
" **52** "	(1 year)	**60**	" "

Discount, for **1** year, in the Monthly alone, **25** per cent., **6** months, **10** per cent.

Discount, for **1** year, in the Semi-Monthly alone, **40** per cent., **6** months, **20** per cent,

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

Transient Advertisements payable in advance. —Yearly Contracts payable quarterly, in advance.

THOMAS G. NEWMAN,

974 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

◆

The Apiary Register devotes 2 pages to each colony, ruled and printed, and is so arranged that a single glance will give a complete history of the colony.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

To Promote a Vigorous Growth of the hair, use Parker's Hair Balsam. It restores the youthful color to gray hair, removes dandruff, and cures itching of the scalp. 11w5t

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Honey as Food and Medicine.

We have just issued a new edition of our pamphlet bearing the above title. It has been revised and enlarged from 24 pages to 32, the new pages being devoted to *new* Recipes for Honey Medicines, as well as all kinds of cooking in which honey is used.

It is undeniable that *pure honey* is the simplest, the healthiest, the most natural, and the most strengthening article of food for healthy persons, as well as the best remedy for the sick; and for the convalescent it is the true balsam of life, to restore them to their wonted strength and health.

What is needed is to educate the community up to this idea, and in no way can that be done so well as by directing their attention to the merits of honey.

This little pamphlet should be scattered by thousands all over the country, by honey producers. In this way it will *create* a home market in almost any locality.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

When 100 or more copies are wanted, they will be sent by express, at the expense of the purchaser.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75.

◆

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent postpaid by mail for 75 cents.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ It is a fact that horse dealers are buying horses with ringbones and spavins, because they can make money by using Kendall's Spavin Cure. 9w5t

◆

"How do You Manage," said a lady to her friend, "to appear so happy all the time?" "I always have Parker's Ginger Tonic handy," was the reply, "and thus keep myself and family in good health. When I am well I always feel good natured." See other column. 11w5t

◆

New Price Lists.—We have received new Apiarian Catalogues and Price Lists from the following:

J. W. Calder, Williamstown, Ont.
O. Foster, Mt. Vernon, Iowa.
E. L. Briggs, Wilton, Iowa.

Also the Gardener's Guide by Parker & Gannett, 49 North Market street, Boston, Mass.—an excellent seed catalogue.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

Sweet Clover Seed Wanted.

I wish to purchase several bushels of Sweet Clover (*Melilotus alba*) Seed. Address, stating quantity and price. **A. H. NEWMAN,**
12wtf 972 W. Madison Street, Chicago, Ill.

FOR SALE—Any number of colonies of choice Italian and Cyprian Bees, in 10 frame standard Langstroth hives. Also, Hives, Sections, and choice bred Queens in their season, at popular prices. Will sell the entire Apiary of 200 colonies, and everything to run them the coming season, at a bargain. Also, wanted, an active man to work at the bee business 7 or 12 months. Correspondence solicited. Address, **T. S. ROYS,**
12wtf Columbus, Wis.

Basswood, or Linden, Trees.

One foot and under $2 per 100, by mail $3; 2, 4, 6, 8 and 10 feet high for 4, 6, 8, 10 and 12 cents apiece respectively. Special rates by the hundred or thousand. **GEO. E. HILTON,**
12w1t Fremont Center, Newaygo Co., Mich.

WANTED—A man to work on farm, in apiary and supply shop, with chance to learn the business. Must be industrious, temperate, and well recommended. Address, stating wages,
12w1tp **C. A. GRAVES**, Birmingham, O.

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying 22c. per pound, delivered here, Cash on arrival. Shipments solicted.

ALFRED H. NEWMAN,

972 West Madison Street, CHICAGO, ILL

CLUBBING LIST FOR 1882.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A. I. Root)	3 00..	2 75
Bee-Keepers' Magazine (A. J. King).	3 00..	2 60
Bee-Keepers' Instructor (W. Thomas)	2 50..	2 35
The 4 above-named papers	4 50..	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A. G. Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 7 above-named papers	6 30..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) ..	2 40..	2 25
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

◆

☞ We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal.

PRICE LIST OF

Choice Italian Bees and Queens,

mailed on application. Address,

W. J. DAVIS,
11w4t Youngsville, Warren Co., Pa.

Bees and Queens a Specialty.

I have a choice lot of Tested Italian Queens, also Full Colonies of Bees, I offer for sale cheap. I shall breed and have for sale after June 1st, young Queens from the best of Imported stock. Satisfaction guaranteed. Price list free.
11w5m **I. S. CROWFOOT**, Hartford, Wis.

FOR SALE—150 Colonies of Italian Bees in improved Quinby hives, in prime condition.
39w1y L. C. AXTELL, Roseville, Warren Co., Ill.

FREE! FREE!

Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.
11wtf E. A. THOMAS & CO., Coleraine, Mass.

FULL COLONIES OF YELLOW BEES,

Not excelled in any point of value; also barrels of Honey. **JAMES M. MARVIN**, St. Charles, Kane County, Ill. 11w2tp

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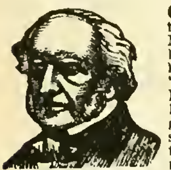

KNOW THYSELF.

GOLD MEDAL Awarded the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self-Preservation;" bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only $1.25 sent by mail; illustrated sample, 6c; send now. Address Peabody Medical Institute or Dr. W. H. PARKER, No. 4 Bulfinch st., Boston. 22w1y

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NOW READY, LAKES CIRCULAR
ITALIAN BEES & QUEENS
HIVES, SECTIONS, FEEDERS &c
BALTIMORE
SUNNY SIDE APIARY

---

65 *ENGRAVINGS.*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
974 West Madison Street, CHICAGO, ILL.

BEE FARM AND APIARY

FOR SALE.

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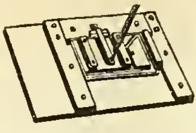

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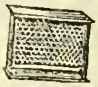

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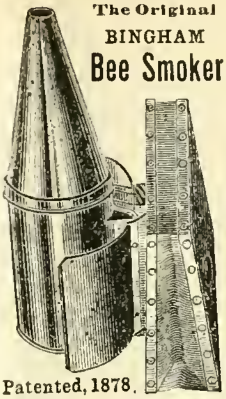

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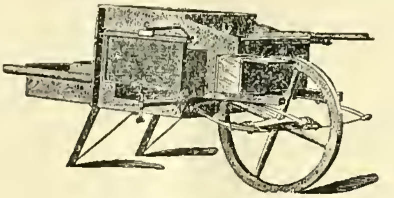

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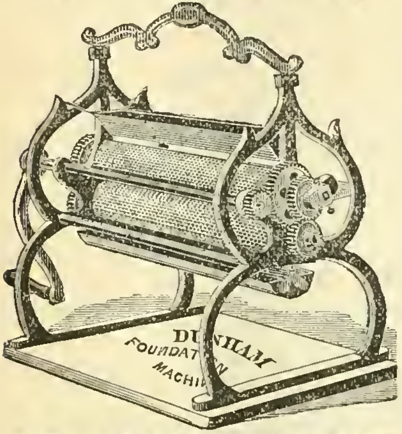

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TOPICS PRESENTED THIS WEEK.

Editorial—

Glucose as a patent monopoly.............. 193
Editorial Items........................193 to 196
Increase by Division........................ 194
Cheap Queens Again 195

Convention Notes—

Local Convention Directory................. 196
New Jersey and Eastern Convention...... 196
Marshall County, Iowa, Convention 197
Notices.................................... 197

Among Our Exchanges—

The Prospect in California for Honey..... 197
Glucose Adulteration and Congress........ 197

Correspondence—

Producing Comb Honey—No. 3............. 198
Pollen and Wintering Bees 198
Albino Bees—Why So Called............... 199
About Rearing Queens 199
My Experience with Syrian Bees 200
Heddon's Honey Board 201
Over-Stocking and Marketing Honey...... 201
The Call of the Strange Visitor............ 201

Selections from Our Letter Box—

Long Idea Hives 202
Gathering Honey... 202
Early Drones................................ 202
Clipping the Queen's Wing................. 202
Wintering Well 203
Ninety Colonies in the Cellar......... 203
Good Bee Pasturage...... 203
The Season, Smokers, etc.................. 203
Beginning................................... 203
Answered to Roll Call...................... 203
A High Fence................................ 203
Improvements in Bee Hives................ 203
Good Increase............................... 203
Bee Moths 204
Blizzard 204
Bees Do Not Puncture Grapes 204

* * *

☞ Mr. G. M. Doolittle is recovering from his sickness, but Mrs. D. is now prostrated by the same disease. We hope both may soon recover.

Glucose as a Patent Monopoly.

In the *Farmer's Review*, for last Saturday, we find the following item:

"Another monopoly has arisen under the fostering care of our patent laws. This time a monopoly is an adulterant. The "National Confectionery Company" claims patents on the use of glucose in candies, and demand payment of royalties on all the glucose used by the confectioners in the past, amounting to $10,000,000 or more, and a royalty of ¼ cent a pound for the future. This will be rough on the candy men and dishonest sugar "refiners," but the public will perhaps be benefited, as the confectioners say they will not use the glucose under such conditions."

We sincerely hope that the result may be as stated by the *Review*—the abandonment of the use of that abominable trash in candies. It is indeed painful to see millions of children eating that death-dealing humbug—glucose—under the guise of candy.

It is steadily being driven out of use, and we are glad to see that one by one, the manufacturers, who use it as an adulterant, are dropping it. No matter what may be the cause, so long as it is done.

It has been used by the makers of printers' rollers, but as its use destroys the elasticity of the rollers so soon—they are dropping it!

It has been used extensively in feeding bees; but the death of large numbers during the winter of 1880-1, and the physical degeneration of bees and consequent losses in spring, are too much for the "bee-keepers" to endure, and they are dropping it!

The candy manufacturers have used it so extensively as to cause a protest to come from physicians against its use—but as the children are *tempted* to obtain the vile trash, and have not sufficient judgment or knowledge to control their appetites, let us hope that the "Company" above alluded to, may, in their avariciousness, remedy this evil.

Thousands of thousands are rapidly going down to the grave, who might have been spared many years to their friends and their country but for the use of this *monster* adulterant.

It is a great moloch, but it must fall—let us "work and pray" for its complete destruction.

* * *

Wired Foundation.—We have received from Mr. J. H. Martin, Hartford, N. Y., samples of his foundation. One is showing his method of shipping wired foundation in little rims weighing about half an ounce. These are to be fastened into the regular frames, and will save the trouble of wiring the frames for those who desire to use the wired foundation. The other is a sample of thin foundation for surplus honey, the bases of the cells being lozenge-shaped, and all equally thin. The samples are very nice.

* * *

New Price Lists.—We have received new Apiarian Catalogues and Price Lists from the following:

H. H. Brown, Light Street, Pa.
J. M. C. Taylor, Lewistown, Md.
J. B. Bray, Lynnville, Tenn.
J. H. Martin, Hartford, N. Y.

* * *

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

* * *

☞ Articles for publication must be written on a separate piece of paper from items of business.

Increase by Division.

Mr. D. D. Marsh, of Massachusetts, in January last propounded some inquiries, which we give below, regarding feeding and division, the answer to which we have withheld till the present time, in order to give them seasonable insertion and save repetition, as they will possess more or less interest for all who have had but little experience in this line.

1. Will it do to feed during April and May, for stimulative breeding, brown sugar, such as is found in the bottom of molasses barrels? I can buy this of grocers for 3 and 4 cents per lb.

2. Will you give in detail the best method of artificial swarming, on the nucleus plan, for one who has 10 colonies in Langstroth hives, and wishes to make about 8 new ones with the least interference with the crop of section and extracted honey?

3. How to get queen cells?

4. When to make up the nuclei—before or after the sections are put on?

5. Whether section racks are to be lifted from time to time to get frames of bees and brood?

1. Yes, if it be pure molasses. For stimulative and breeding purposes it should be dissolved and thinned with warm water, and fed only as fast as consumed.

2. This is perhaps one of the most interesting features in the management of an apiary. All operations will be governed somewhat by the number of colonies to be manipulated, and the amount of increase desired; it should also be borne in mind that, although the amount of increase possible is almost unlimited, all excessive increase will be at the expense of the surplus honey yield. In order to be better understood, we will suppose the apiarist has 4 good colonies which he wishes to increase to 9. As a progressive bee-keeper, he will be actuated by a desire to possess the best; therefore, the colony which has heretofore proven the most satisfactory in all things, will be selected as the one from which to rear queens for new colonies. This colony, for convenience in summarizing, we will designate No. 1. As soon as spring opens, feed No. 1 about half a pint of thin cane-sugar syrup or honey diluted with warm water. This had better be fed at the entrance in the evening, to avoid robbing, and be given slightly warmed. Keep this up till there is capped drone brood in some of the combs, or better still, till you have drones emerging from the cells. Now move one of the other colonies from its stand (which we will designate No. 2); place No. 2 on a new stand, put a new or empty hive on the stand vacated; lift the frame from No. 1 on which you find the queen and place in the empty hive (No. 3); place a frame of foundation in No. 1 and close the hive. From No. 2, and each of the two hives not numbered lift 2 frames of brood well advanced, shake off the old bees, and place in No. 3, with the queen lately placed there. These last frames put in should be alternated as much as possible, so as to confuse the working bees from No. 2, which will naturally return to the old stand and enter No. 3. Fill up the latter hive with frames of foundation, alternated with the brood combs, to its full complement. If a 10-frame hive, this will give it 7 frames of brood, 3 frames of foundation, and your best queen. If you have bright, clean, empty combs, they will answer about as well as foundation, though we prefer the best foundation. Put in foundation or combs to supply the places of those taken from the other hives, close them, and your first division is completed, making 6 colonies.

In ten to twelve days, examine carefully the combs in No. 1, to see how many good queen cells you have capped over. Close the hive carefully, and let it remain 24 to 36 hours. As soon as you have determined the number of cells, remove each of the 4 colonies which have queens to new stands, and place empty hives where they stood. Take the brood frame from each on which you will find the queen, and place in the empty hive where they were moved from. Add three more brood frames to each, from the hive removed from there, place two frames of foundation or empty combs in the center of these, put a division-board on the outside of the combs, and close the hives. The hives from which these were taken will each be left with six brood frames; to these add two empty combs or sheets of foundation, put in division-boards at the outsides, and close for 24 or 36 hours. You now have 4 new colonies with queens, 4 without queens, and 1 with queen cells.

At the end of 24 hours you will find queen cells started, or preparations to start them, in the 4 queenless colonies. With a sharp, narrow-bladed knife circle out 4 of the best queen cells from No. 1, leaving a good one; cut a round hole, about 1½ inches in diameter, from the center of a brood frame in each of the queenless colonies, and slip in a queen cell. These should fit pretty tightly, so they will not drop out. Great care must be observed not to bruise any of them, and they must not be cut so close to the cell as to run a chance of injuring the young queen yet in the cell. In a few days these young queens will be hatched, mated and laying, and you now have 9 colonies. As fast as the foundation in these colonies is drawn out, the combs can be spread and new foundation or combs added, until the full complement are in the hive.

You will now have 9 colonies from the four in early spring, and by close attention in supplying good foundation as fast as they are prepared to receive it, with a good white clover and basswood yield, or a few acres of sweet clover pasture, you may expect a fine surplus yield of extracted honey.

With 10 strong colonies to start in with, the strongest and best should be removed from its stand, and an empty hive be put in its place; now select a comb from the colony with only fresh eggs and place in the empty hive on the old stand; put in two combs of honey from some other colony, and an empty comb or sheet of foundation on each side, now confine all to the center with division boards, and shake the bees from the combs in front of the new hive. Twenty-four hours before the queen cells are ripe enough to cut out, form a three-frame nucleus from each full colony, and after they have started queen cells, destroy them, and graft in your ripe cells. In all cases, supply foundation or empty combs in place of those taken from the colonies, and add others to the nuclei as fast as needed.

3. This is answered in the last paragraph.

4. Make your division during fruit bloom, or as soon thereafter as weather is favorable.

5. No need to lift section racks, as division and increase will be completed before white clover or basswood come into bloom.

☞ We have received several more complaints and samples of the sections sent out by that Doon, Canada, supply dealer. Mr. Mason reports, however, that he has made satisfactory amends to him. Let us hope that he may do so with all, and thus save further complaints and annoyance.

Cheap Queens Again.

Since our editorial comments regarding cheap queens, in the BEE JOURNAL for March 8th, we have received the following letters relating thereto, which we publish entire, omitting the names of the writers, to prevent any personal controversy, only desiring the arguments:

DEAR SIR.—The BEE JOURNAL for March 8 contains an editorial on "The Cheap Queen Traffic," in which you make some astonishing assertions for an editor who has no axe to grind. So far, I have passed all the articles and comments on this "dollar queen" question, unnoticed; but when I see that the editor of the AMERICAN BEE JOURNAL is inclined to denounce us (untested queen breeders) as frauds, and selling worthless trash at the expense of those purchasing, and at an actual damage to the bee-keeping interest, I cannot help but defend myself at least. Taking your editorial in the whole, the above is what you seem to impress upon your readers.

Now, sir, will you please give us the name of the "breeder, who has had more experience with cheap priced queens than any other in America, or the world, and has probably reared and sold nearly as many as all the others combined, etc.," and why, if his opinion is, that not one queen out of ten sent out, is worth a cent, did he rear and sell as many of them as all of the queen breeders combined? I think you should also give the name of that honest Michigan breeder (in justice to him) who quit after he found out that he was defrauding his innocent purchasers.

I do not think it is necessary for me to argue this point, for I know I could not convince you and those whose motives are prompted by self interest or prejudice; the only point I wish to arrive at, is to try to prevent your readers to labor under the impression that I, as a breeder of untested queens, sell worthless trash and that I am defrauding those who deal with me, and the only way is to ask every one who has purchased queens from me in 1881, to drop you a postal card and state what kind of a queen they received from me, and if 10 per cent. report worthless trash, I will pay you $100 for the benefit of any institution—or, if you prefer, I will send you a list of all and you can drop each a postal card and I will pay you the cost and trouble. I have reared nearly 1,200 queens in 1881.

I claim to sell no queen that I would not have for myself and this has been my invariable rule. It is no more trouble to rear good queens than it is to rear poor ones, when you understand or know how to do it, etc.

I know it is more expensive to rear queens in the North, as you cannot winter nuclei, but here, mine (which are all 4 or 5 frames) remain on their summer stands all the winter, and come out in the spring ready for business.

If queens cannot be reared at $1, from a selected mother, at a profit, can the advocates of tested queens tell us how they can rear queens fully tested at $2, and make it pay?

I will conclude in saying that you may fight this "dollar queen" business with legal arms, but don't make your readers believe that all such breeders are selling worthless trash, etc., by citing two or three breeders' experience, though one of them has reared and sold as many queens as all the breeders of America combined!

MR. EDITOR: — Concerning your editorial on "The Cheap Queen Traffic," I would like to inquire if the quotations which you make from experienced breeders that "not one queen out of ten sent out is worth one cent," and "such were not usually worth 25 cents a dozen," refer to queens sent out by queen breeders in general, or to what is usually understood by dollar queens, viz: Queens which are the daughters of imported, or very choice mothers, and which have just begun to lay.

If they refer to the former, I cannot see how the buyer will be helped by being compelled to pay a greater price for his queens, for the breeder who will send out superannuated and worthless queens for a dollar, will certainly not scruple to send out the same for a higher price. If, on the other hand, they refer to the dollar queen as usually understood, and they are founded in fact, we are confronted by a very serious hindrance to progress in bee culture. For, if not one in ten is worth a cent, the question occurs: How many would have to be raised, tested, and destroyed, before one could be found which was really valuable, and if the rearing of such queens at a dollar each is found by experienced breeders to be unremunerative, the price of a really good queen would leave the majority of bee-keepers no choice but to do without them altogether?

I have no personal acquaintance with any queen breeder, but I believe there are many who are too conscientious to continue in a business which is such a fraud on innocent customers as the above quotations would seem to indicate.

We certainly do not want to buy queens at a dollar each, with the prospect of finding only one in fifteen or twenty that is worth her price, but if we pay three or four dollars for a queen, we want some assurance that the queen which we buy will be worth the money.

In reply to Mr. Alley's article on page 151 of the BEE JOURNAL, permit me to say that while I am willing to admit most, if not all he says about "dollar" queens; it seems to me he has made a most ludicrous blunder in winding up his article. He says: "Let all the leading queen breeders combine, and resolve not to sell queens less than $2 each, and not sell any that are not thoroughly tested; then, if bee-keepers want a cheap article, let them purchase of those who have not had much experience at the business."

It appears to me, from the above sentence, that Mr. Alley is endeavoring to establish a monopoly in the queen rearing business, rather than to make it more profitable to both breeder and purchaser.

It is evident that any apiarist of ordinary skill can produce untested queens, at the rate of one every 15 days, for each nucleus or colony, and many claim to do better than this. Every apiarist knows that it takes from 22 to 25 days to test a queen for prolificness and the color of her progeny; and to test the qualities of her bees will take at least 25 days more, and then, it must be at a time when honey is coming in freely. Now, it looks strange to me that there can be more profit from selling queens at $2 each, when it takes from 65 to 70 days to rear and test them, than to sell at $1 each, and produce them in 15 or 20 days. It surely does not require 20 years, nor 10 years, and I hardly see the necessity of its taking 5 years, to learn to breed bees; and I cannot see the consistency in Mr. Alley's making such a thrust at beginners, as appears in the above sentence.

I will offer a suggestion: Let every breeder (whether he be a leading one or not) who wishes to do an honorable business, test thoroughly, the qualities of the worker progeny of every queen he may wish to breed from, then breed from such only as are valuable. Then test the young queens for size, activity and prolificness, and their progeny for activity and uniformity of size and color, whether they are black, brown, or yellow, and then sell at a living price to the breeder, and I feel confident that the purchaser will not be defrauded.

We have long held to the opinion that "the best is the cheapest" with queens, as with everything that is worth a price, and have always been outspoken in our condemnation of the cheap queen traffic. We have not felt the necessity for condemning the breeders of such "as frauds," and we have not insinuated anything of the kind, because we know there are honorable men engaged in breeding and selling them, as also honorable men who have dropped the business from honest convictions, having been convinced that the whole thing was wrong. Nor do we feel called upon to give their names, and subject them to criticism for having obeyed the dictates of an honest conscience, preferring rather to let time prove them and ourselves correct. There may be, and probably are, unscrupulous men engaged in breeding and selling worthless queens for tested, but this establishes no point except as to their unfair dealing. When convinced that no better queens can be purchased for a remunerative and fair price than can be bought for one dollar, we shall cease advising our readers to buy only the best, and only from the most discriminating and careful breeders. If the majority of the "dollar" queens are not as good as the majority of the high-priced tested ones, then they are not so cheap.

We think we were not extravagant in our estimate of the number of cheap queens bred and sold by Mr. Henry Alley, during the 20 years of his experience, as compared with others engaged, and certainly if, in that length of time, he could not determine the value of such queens, and the profit derived from the breeding of them, no one is competent to do so.

Our honest convictions remain, that the cheap queen traffic has been a detriment to the development and permanence of the better strain of bees, and will yet prove a curse to apiculture in America. To the future we leave the question for settlement, with every confidence that time will sustain us in our position, and the bee-keepers of the future will repair the errors of the past and present, and recover the vantage loss by a mistaken economy. Meantime, we drop the question for the present, with the injunction to *buy and breed only the best.*

* * *

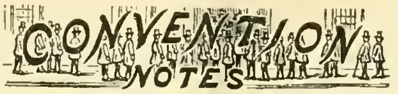
☞ Bees will be in lively demand this spring. We have hundreds of calls for copies of the BEE JOURNAL every week from beginners and those who intend to enter the ranks of bee-keepers. They want to read the advertisements and ascertain where to buy bees. Those who have any thing for sale should now be on the alert, and get their advertisements before the public. Not a week should be lost now, for the time is at hand to do business. "A word to the wise is sufficient."

* * *

☞ By all means, bee-keepers should provide for the future by planting honey producing trees. One of the best is the basswood. Do not let a spring pass without doing something in the line of providing for the future in this way.

* * *

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.



Local Convention Directory.

1882. *Time and Place of Meeting.*

April 1—Barren Co., Ky., at Sinking Spring, Ky.

11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.

15.—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec.

19, 20—Tuscarawas and Muskingum Valley, at Coshocton, O.
J. A. Bucklew, Sec., Clarks, O.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27,—Western Mich. at Grand Rapids.
W. M. S. Dodge, Sec., Coopersville, Mich.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May 2, 3—Eastsrn N. Y. Union, at Cobleskill, N. Y.
C. Quackenbush, Sec., Barnesville, N. Y.

11—Champlain Valley, at Middlebury, Vt.
T. Brookins, Sec., East Shoreham, Vt.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

* * *

New Jersey and Eastern Convention.

The bee-keepers of New Jersey and vicinity met at New Brunswick, N. J., on Wednesday, March 15, to organize a society.

The meeting was called to order at 10:15 a. m. by Mr. G. W. Thompson, of Stelton, who was subsequently elected temporary chairman. He stated the object of the gathering, and enumerated the interests involved which had brought forth such a step.

Mr. King, of New York, thought that a name for the new association should be adopted first.

H. M. Cook, with this end in view, moved that a committe of five be appointed to draw up articles embodying a constitution and suggest a name for the association.

The motion was adopted unanimously, and the following were appointed such committee: Messrs. Hasbrouck, Rue, King, Harmeling and Read.

While the committee were at work Mr. Thompson spoke at length on the subject of bee-keeping. There was an unlimited demand for pure products of the farm, especially honey, and those who were engaged in farming should organize and thus protect themselves against adulterations and spurious farm food.

Prof. Kroeh, of Hoboken, said that it had been a disadvantage to the majority of bee-keepers that they had not been in harmony and consultation with each other in regard to their products, thus losing in the money value of marketable food. Such an organization was eminently proper in his mind, and each bee-keeper should exert himself in keeping alive the interest thus far manifested in the premises.

Prof. Hasbrouck was elected as temporary Secretary, who read the constitution and by-laws suggested by the committee appointed for that purpose, which were adopted. Adjourned.

In the afternoon, the New Jersey and Eastern Bee-keepers' Association met and unanimously elected the following as its first officers:

President, G. W. Thompson; Vice President, Ira Yeager; Secretary, Prof. J. Hasbrouck; Treasurer, Prof. C. F. Kroeh.

The following gentlemen were elected as the executive committee: T. F. Reed, Brooklyn, N. Y., three years; J. H. M. Cook, Caldwell, N. J., two years; C. H. Rue, Manalapan, N. J., one year.

Mr. Cook stated that each member should bring in a report at the next meeting, showing the condition of his bees and the net value of the honey harvested.

Prof. Kroeh moved a vote of thanks be extended to Mr. King, of New York, for the liberal donation which he had made to the Association of the proceeds of the sale of his Magazine to the members, turning the money into the treasury of the Association.

Mr. King acknowledged the action and stated that he would in addition give each lady who should join the Association a receipt for one year's subscrtption to his bee Magazine. This brought forth a round of applause from the members.

The gentleman referred to last, suggested that Secretary Hasbrouck keep up a correspondence with the various bee-keepers' associations throughout the country for the benefit of this organization. This suggestion met with approval, but the Secretary was not instructed to do so.

Mr. Tompkins, of Newark, stated that although a honey consumer he was not a bee-keeper, but he could not do without the pure article in his home.

Mr. King said that it would be eminently proper for this Association to offer premiums to its members for the best honey during the coming season, said honey to be put up in good and substantial manner and form. This gentleman also said that the ordinary syrups were manufactured with sulphuric acid and more than one-half glucose, which were injurious to children. Extracted honey ought to take the place of these poisons.

Mr. Cook suggested that the Association take some decided step in regard to the protection of the members from adulterations of syrups.

Mr. G. W. Thompson favored such a step but cautioned moderation in the premises.

A number of the members spoke on the subject of adulterations. One said that recently a man was found by him peddling adulterated honey from door to door. He was told to get out of the place at once or he would be prosecuted. The member submitted that adulterations were practiced to an alarming extent in this State.

Prof. Hasbrouck said that most of the adulterations in honey were put up in small bottles and tumblers, but that no successful adulteration had been found in comb honey.

The next meeting of the Association will be held in New Brunswick, at the same place, in November next.

Prof. Kroeh thought that all the members should co-operate in furthering the objects of the association, by communicating with each other and preparing notes as to bee-culture, etc.

Association adjourned.

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Marshall County, Iowa, Convention.

The Marshall County Bee-Keepers' Association met at the court house in Marshalltown, March 4, at 1 p. m. G. W. Keeler acted as president.

The Secretary read a short minute, stating the cause of the failure of the previous meetings. The society had an interesting talk on the subject of bee culture, which all felt beneficial. Mr. Samuel Richey joined the society.

The subject of meeting quarterly, instead of monthly, was deferred until the next meeting; also the election of officers.

The subject for discussion at the next meeting, is "care of bees in the spring, and how to manage them to secure the most honey."

Adjourned to meet on Saturday, April 1st, at 1 p. m., at the same place.

All interested in the "busy bee" in Marshall and adjoining counties, are respectively invited to attend.

G. W. Keeler, *Pres., pro tem.*
J. W. Sanders, *Sec.*

◆

☞ A special meeting of the Western Michigan Bee-Keepers' Association, will be held in Supervisors' Hall, Grand Rapids, Mich., Wednesday and Thursday, April 26 and 27, 1882. Wm. M. S. Dodge, *Sec.*

☞The spring meeting of the Northern Ohio Bee-Keepers' Association will be held at Norwalk, O., on Saturday, April, 15, 1882.

S. F. Newman, *Sec.*

☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. Demaree, *Sec.*
Christiansburg, Ky.

☞The Central Michigan Bee-Keepers' Association will meet April 20, at Lansing, in the Capitol building. Programme.—President's annual address, Rev. J. Ashworth; bee hives and fixtures, E. W. Wood; Cyprian bees, J. Harper; the coming bee, Prof. A. J. Cook; care of old combs, Stephen C. Perry.

Rev. J. Ashworth, *Pres.*

☞The Barren County Bee-Keepers' Association meets at Sinking Spring school house, three miles west in Glasgow, Ky., on the first Saturday of April, 1882. All bee-keepers of the county are invited.

I. N. Greer, President.

☞The semi-annual meeting of the Tuscarawas and Muskingum Valley Bee-Keepers' Convention, will be held in the Town Hall at Coshocton, O., on April 19 and 20, commencing at 10 a. m. A cordial invitation is extended to bee-keepers everywhere.

J. A. Bucklew, *Sec.*, Clarks, O.

☞ The spring meeting of the Mahoning Valley Bee-Keepers' Association, will be held at Berlin Center, Mahoning Co., Ohio, in the Town Hall, on Saturday, March 25, at 1 p. m., sharp. All interested in the science of apiculture are invited to be present and participate in the discussions of the day. The following questions will be discussed: "The merits of the different races of bees." "The best method of securing surplus honey." "Which is most profitable to the bee-keeper, comb or extracted honey?" An essay on pasturage or forage for bees will be given.

Leonidas Carson, *Pres.*

☞The Champlain Valley Bee-Keepers' Association will hold their semi-annual meeting at Middlebury, Vt., May 11, 1882. T. Brookins, *Sec.*

☞ The Texas State Bee-Keepers' Convention will hold its meeting at Judge W. H. Andrews' Apiary, at McKinney, Texas, April 25, 1882.

Wm. R. Howard, *Sec.*

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Glucose Adulteration and Congress.—The *Western Rural* remarks as follows on this subject:

Food adulterations have attracted the attention of Congress this winter to a commendable degree, and there are good grounds for hope that the honest producer will yet find protection from a ruinous competition, and that the consumer will have some guaranty that what he eats is pure.

The business of adulterating food-products is without a single exception the most villainous that men have ever engaged in.. It not only robs the producer. but as a general thing, it destroys health and life, and does it under such false pretenses that the victim is unaware of his danger. Yet such enterprises have gained such headway during the last few years that millions of money are invested in them, and every attempt to remedy the evil is met by that peculiar sort of influence which is common with men who are engaged in disreputable practices.

The efforts in Congress this winter have been opposed by large, wealthy and influential delegations, who have probably left nothing undone to defeat the enactment of laws which shall at least compel the manufacturers of adulterations to inform the purchaser of their character before he purchases them.

The Western delegation of glucose manufacturers represented to the ways and means committee last week that the principal opposition to glucose manufacture, comes from the sugar refiners, that it was a growing Western industry, which furnished a market for the products of the country, and that consequently it ought to be encouraged.

The first statement is absolutely false. Glucose finds an opponent in every cane grower in the country, and cane growing in a country that is compelled to import its sweets, is a vastly more important industry than glucose ever was or ever will be.

It also finds an opponent in every consumer who knows that he cannot purchase one gallon of pure syrup, either cane or maple, and that it is with the utmost difficulty that he can obtain a pound of pure maple sugar.

It also finds an opponent in every farmer who knows that he is compelled to purchase adulterated sweets and who realizes that by filling the markets with adulterations, he encourages dishonesty in all departments of production, and thus endangers his profits upon nearly everything he grows.

If glucose has friends, they are only among those who are interested in the profits of its manufacture, or who do not know what it is or what the tendencies of the business are.

Passing over the fact that in the manufacture of the stuff sulphuric acid is used, and that the product contains this poison in large quantities, it is a fraud because it does not contain near the amount of saccharine matter that cane sugar or syrup does. Even if the purchaser gets it for a few cents less than he would have to pay for sugar—which is not often the case —he is cheated because what he buys is largely destitute of sweetness.

◆

The Prospect, in California, for Honey.—The *Prairie Farmer* of last week contains the following:

California bee-keepers are jubilant over the prospects for a profitable honey season. Colonies have wintered well and are strong and healthy. One thing there the bee-keepers begin to dread, and that is the "Heathen Chinee." Says a correspondent of the *California Agriculturist*: When I find them taking notes, I generally try to be careless, and give them no chance to get any practical information. I understand that some bee men have Chinamen to assist them at their work. This I think a very bad arrangement. Chinamen are quite fond of sweets. Honey is too high-priced to meet their idea of prices. If they should acquire the system of bee culture, our occupation would be at once gone. That they could learn to do as they see others do is an established fact, and the honey business is no more difficult for them to master than any other, with their dogged perseverance and cheap industry. My hope is that they may never get the entering wedge.

CORRESPONDENCE

For the American Bee Journal.

Producing Comb Honey—No. 3.

G. M. DOOLITTLE.

In my last I stated how I built up weak colonies, and left off where all colonies were ready to receive the boxes, so the next thing is getting the boxes ready and putting them on. The getting ready part I generally work at by odd spells, during the winter and early spring, so as to have all in readiness when they are wanted; but as this is the time they are wanted, I will give the way I prefer them, and advise that none wait about this getting ready part till just as the boxes are wanted, because I gave my mode of doing so at the time the bees were ready to receive them. During the leisure hours of winter and early spring is the time to have all in readiness, and they who are not thus ready are often the losers of a good portion of the honey which might be secured.

But about boxes; what size shall we use? As my mind goes back over the past, I remember the boxes my father used, made of rough ⅜-inch lumber, of a capacity to hold 15 lbs., and large enough to cover the whole top of the hive, being perhaps 6 or 7 inches deep. This honey was generally taken to our village in the box, and there turned bottom side up to expose the tempting sweet, encased in the nice, white combs, and I well recollect with what pride father would cut out the nice cards of well filled combs, as it was exchanged for the necessities of the family. Later he used two boxes covering the top of the hive, all planed smooth and a glass in one end, which at that time was considered to be all that was required. Then came the Langstroth 6 pound box; then the Alley 3 pound box; next the prize box, holding 2 pounds, and finally, the 4¼x4¼, with its 1 pound of honey. I often wonder what father's customers would have thought had he suddenly changed from the large 15 pound box and presented them with honey put up in nice glassed crates, filled with 1 pound sections.

To return, as I have wandered a little in tracing the steps of progress that have been made in boxes and sections, we have to-day two sizes that are generally adopted—the prize box, which is 6¼x5¼x2 inches outside measure, and the 4¼x4¼x2, known as the 4¼x4¼ section, the one holding about 2 lbs., and the other about 1 lb. The market seems to favor the 1 lb. section, not only as to price, but it sells much more readily, and while the prize section goes begging a market, the 4¼ style is all sold and more is called for; therefore it is easy to see which way the future points, as to style of section, but it is not so easy to see how to change all our equipage, adapted to the prize section, and start with the 4¼ style without a loss greater than the compensation gained for the first few years at least.

One of our largest comb honey producers writes me, "it is evident that the 1 lb. section finds a much more ready sale at better prices than larger boxes, still a change of style as regards sections would involve a loss to me of several hundred dollars, therefore I cannot entertain the idea at present." Well, this being the case, shall we stick to these prize boxes or try and see if we cannot find a way out of it, and not cause us any loss whatever. As I prefer the latter plan, I will tell you how I arrange the matter. At the N. E. Bee-Keepers' Convention, in 1880, Mr. Thurber was reported as saying that the box which sold the most readily with them was a box 3¼x5½, holding about 1½ lbs., and that he thought the 1 lb. section was as much too small as the prize section was too large, or words of like import. I have not his exact words before me, but quote from memory. This set me to thinking, and I soon hit upon a box, three of which would fill a case in place of where I used two before, thus giving me a section 6¼x3½x2 outside measure. To test them, this last fall I placed them in market by the side of the 1 lb. sections, in Boston, New York, Philadelphia, and other places, where I found they sold quite as readily as did that section, and for full as satisfactory prices. Thus I had gained the desired point without the waste of any of my fixtures. All the sections I make in the near future will be of this size, and as I can soon work out all my prize boxes on hand, I shall have no loss whatever. Those using a three box case can use 1 prize box and 3 of the above style, or make their sections still narrower, so 5 will fill the case, however, I hardly think as much honey can be obtained by the use of these small sections as with larger ones, still the price and readiness of sale will overbalance this part of it.

After deciding on the style of section we will use, they are to be filled with comb foundation, if such is thought to be profitable, and if not, put a starter of nice white comb in the top of each box. I prefer to cut these starters in a triangular shape, about 1½ inches long on each side. Now turn your sections top side down, hold a hot iron close to the box, and after holding the starter immediately above and touching the iron, draw the iron out quickly and press the starter gently on to the wood, when it is a fixture. I then fill the cases with sections, putting sections filled with comb left over from the previous season in the center case, if I have them. If I have enough such to fill two cases, I place the two apart so as to set a case having boxes with only starters in them between. When I have enough to do this, I think I am sure of a good crop of honey if such is attainable from the fields, for these combs are more profitable to an apiarist than cash in the bank. With the brood chamber filled with brood, as I have shown you it should be, and honey coming in from the fields, these combs are at once occupied, and those sections between and immediately surrounding them, that have starters in, are soon filled with beautiful white comb, and a good yield of comb honey is a certain thing, if the flowers continue to secrete nectar.

Having all prepared and bees all in readiness, the next thing is to put on the boxes. I put on generally but 5 cases at first, and if prepared as above it will be seen that 2 of these contain sections full of comb, which are ready for the bees to commence work in at once. In about a week all are gone over with again, and if those first put on are being worked in, more are added by spreading those apart and 2 more cases are inserted near the center and by placing a tier at one side. The next time I go over them probably some will be ready to come off, and in any event as many sections are now given as can be worked in to advantage by the colony, which generally takes the full capacity of the hive.

My next will be swarming, and how I manage when working for comb honey.

Borodino, N. Y.

For the American Bee Journal.

Pollen and Wintering Bees.

E. L. BRIGGS.

We have heard much of late, from certain quarters, concerning "pollen and bacteria," being the causes of dysentery among bees, that if the disease were contagious, I fear we should all have contracted the malady from over doses of pollen, pollen! noon, night, and morning, and by the week, until we are more than willing to dismiss Mr. Heddon, and to put ourselves, and our bees, too, on a low diet of pure honey, and see if we cannot get over the nausea we have so long felt, under the doctor's doctoring. I suggest that he feeds all the rest of his pollen doses to his small, dark, hybrid crosses, of black and Italian "coming bees;" and if it does not kill them in the next six months, then put them upon the market as the toughest bees out; on the principle of the "survival of the fittest."

Somehow our bees, out here, will persist in living through this winter, though their combs are full of pollen, and though they have been breeding quite plentifully ever since the 1st of January. Something else besides pollen and breeding, then, causes dysentery. That something else might be found in Heddon's "brick," made of flour and sugar; fed to the bees dry. This might be impure, or adulterated honey and pollen both. Flour is not genuine pollen.

Late last fall, two or three of my colonies worked freely upon the skins and juice of grapes which were being manipulated for wine by a neighbor. The result was, in the early part of winter, while the bees were consuming this grape juice, they suffered considerable from diarrhea, spotting the snow in their flights, and many of their bodies were so distended with the foul stuff on issuing from their hives that they were unable to take wing, and consequently perished at the mouth of their hive.

Neither can bees live upon pollen alone; for this is not their natural food. But bees can and do subsist on honey and pollen together. This is their natural and healthful diet, when they can mix it to suit their own taste. If the pollen or honey is fermented or turned sour, then it becomes unnatural, and consequently unhealthy.

Long continued and intensely cold weather, may shut them in to the limits of their brood nest, and after consuming all the honey therein, as a last resort, they try to appease their hunger on pollen, and, of course, being unnatural food, diarrhea results, and the colony perishes. One man says: "Diarrhea resulted from starvation." So it did! Another says: "It resulted from the consumption of pollen." So it did! Another says: "It resulted from long continued cold and dampness." This is true, too! But the "cold and dampness" kept them away from a supply of pure honey; hunger and starvation drove them to pollen as the only resort; this insufficient and unnatural food, produced enormous distension of the abdomen, and diarrhea; and all these causes resulted in death.

The truth in a nutshell is this: Bees in order to winter well, must have access at all times to pure honey, or some substance equally healthy to the bee, as food.

They may have access to impure honey, glucose, grape juice, cider, sorghum juice, West India molasses, or even pollen, or to Heddon's brick, in a good warm cellar, and unless they can fly out often to void their feces they will perish.

Colonies in the same yard will gather some such impure substance in the fall, perhaps many pounds of it, while others will gather none. The former may all die, while the others all do well.

Four frames, three-fourths filled with honey gathered from white clover, linden, or buckwheat, early in the season, put one inch apart into the middle of the hive, with a division board each side, and the vacant space filled with chaff, shavings, or old rags, with holes through the middle of each comb, for the free passage of the bees, will winter any colony safely. Set a box, with a cloth bottom, three inches deep, filled with chaff, on top of the frames, if wintered in the cellar; or, if wintered on their summer stands, surround the whole hive, sides, bottom, top, back, and front, with chaff 4 inches thick; with a fly-hole ½ by 1 inch through the chaff and front part of box, to give them air, and egress, as they may choose, every fair day. If any one wishes to try the experiment, one of these middle frames may be packed full of good fresh pollen, cells covered with honey and sealed over as they usually are; and if the bees do not winter well I will pay all damages. Wintering bees is as simple as wintering stock of any other kind.

1. Keep them comfortably warm and dry.

2. Give them plenty of pure sealed honey, or pure sugar syrup, with plenty of pollen, where they can have access to it at all times. They will mix to suit themselves.

3. Let them remain in entire quietness until warm weather; and they are no more subject to disease than cattle, horses, sheep, or men.

Wilton Junction, Iowa.

For the American Bee Journal.

Albino Bees—Why So Called.

S. VALENTINE.

Mr. Editor: Frequent reference has been made by different parties to the word albino, as an improper name for the bee which is so called. In the *American Bee-Keeper*, for November, 1881, Mr. Taylor says: "If they have no black blood in them, the name albino does not sound well, as I understand it to mean white coming from black." Mr. Harrison, editor of the *American Bee-Keeper*, and others, have advanced such an idea.

What does the word albino mean? Webster says that the term is of Latin origin; that it comes from *albus*, which means white. If you will follow the term, from its origin through all its combinations, you will find that the word albus gives its signification to all of its forms. Sometimes, owing to a freak of nature, black parents have had offspring which possessed an unnatural whiteness, such as white negroes; but this peculiarity is not confined to any color or nationality.

White parents are known to have children of this peculiar whiteness, with white skin, hair, and pink eyes. I could give the names of 3 or 4 persons, some male, others female, possessing this peculiar whiteness, commonly called albino. Now why they are so called is evidently because of the whiteness. Refer to the "Encyclopedia Americana," and you will learn that white rabbits and white mice are known to have a similar origin.

I need not dwell longer upon this subject, for any physiologist or scholar knows that while white offspring, coming from black parents, are called albinos, it is not because the term signifies coming from black, but because the word albino signifies a peculiar whiteness. The bees which we call albino are the whitest bees that are known; therefore while they are not perfectly white, albinoes is a proper name for them, until one can be found that is yet whiter.

The albino bee is of American origin. Mr. Pike, I believe, was the first to bring them to the public notice. In the spring of 1874, he noticed one of his Italian queens breeding about one-half of her progeny with albino markings. He at once bred them in, and claims that he succeeded.

In July, 1876, I bought an imported queen from Mr. Willman, of Pennsylvania, from which I produced albino bees, as may be seen in an article, "Origin of the Albino Bees," in the Bee Journal for December, 1880, page 557. In June, 1879, I succeeded in breeding them to a high standard of purity, breeding albino markings to every bee, which to-day stands forth as the standard for the albino bee.

Before Mr. Pike called attention to the albino bee, we occasionally heard some one here and there speaking of albino as a term. They applied to some few bees developed in their apiaries, but no especial attention, as far as we can learn, was given to this variety or name, until Mr. Pike brought them more prominently before the public.

Mr. Pike is evidently entitled to the credit of first producing and calling public attention to the albino bee, but I claim that of giving the albino bee first to the public in its purity; *i. e.*, with albino markings. Having accomplished this, Mr. Pike or myself, or both of us, surely have the right to name the bee, as much so as the inventor has to name his invention, or the parent to name his child. Apis Americana would be a very good name, but it would only signify its American origin, while albino signifies its shade of color by which the eye may readily recognize it; hence, we have named our bee—the result of our experiments or discovery—albino, and we feel no little pride in the appropriateness of the name. We call our bee albino, not because it comes from green, red, blue or black blood, but because it is a whitish bee—the whitest known.

Double Pipe Creek, Md.

For the American Bee Journal.

About Rearing Queens.

HENRY ALLEY.

After reading Mr. Butler's article in the Bee Journal, I am prompted to write on the above subject again. How to rear strong, healthy, hardy, and prolific queens, has been my study for the past 20 years. My experience teaches me that the more queens a colony of bees rear, the shorter-lived and poorer in every way will the young queens be.

Now, if one will examine the interior of a hive after a swarm has issued they will find from 6 to 12 queen cells. Seldom less than 6 or over 12. Now, these cells are generally all sealed before the new swarm "comes off." Why is this? It is merely to have a large number of bees to feed, keep warm, and nurse the coming queen while in the larval state. It will also be found that a larva 3 or more days old will not be selected by the bees from which to rear a queen during the preparation for natural swarming. If the queen is removed from a full colony, the bees will select eggs and larvæ quite old to rear queens from. They seem to understand the need of a queen as soon as possible; but in natural swarming, the egg is selected for the young queens, and the bees seem to know that they have plenty of time in which to build the cells. I do not think that a queen reared from a larva 3 days old will be very prolific for any great length of time. Such queens may do well for a few months, and then will disappear. I am aware that all queens reared under the swarming impulse do not prove prolific and long-lived, neither do all the artificially-reared queens. As there are a much larger number of artificial queens reared than natural ones, of course there will be a larger number of inferior queens sent out.

Now, as we must have artificial queens, the question is, how can we best rear them, and keep up the standard of prolificness, hardiness, and purity? It certainly cannot be done if queens are reared as some queen dealers say they are rearing them. I know, from several years' experience, that good hardy queens cannot be reared by inserting a frame of eggs and larvæ in all stages, in the middle of a full colony of bees. I find in such cases that the bees will select an old larva, say 1, 2, or 3 days old for a queen. I have had some colonies make as many as 60 queen cells at one batch. The colony was an extra large and powerful one, and the queens were pretty good.

I do not think very valuable queens can be reared in a hive that has just reared one lot; such queens will be very poor. But a colony of bees will continue to rear queens good or bad, if eggs are given them, so long as there is any hatching brood in the hive. Perhaps Mr. Butler will remember what I said in the JOURNAL some time ago, that I allow about 25 queens to be reared at one time, by 1 colony of bees. I think I said at that time that the bees had no other brood to care for except the 25 eggs given them to rear queens from. I find that a strong colony of bees put in a hive without any brood, except enough to rear a few queens from, will make double the number of strong and hardy queens that they will in a hive full of brood. A strong colony with not over 25 eggs, will concentrate all their forces on the small amount of brood given them, and as queen-rearing is their only object, one can expect nothing but good queens as a result. With my method for rearing queens, my full colonies are never queenless, and I use no brood in my queen-rearing hives, and still use all the bees in a strong colony for queen-rearing. To rear good, hardy, and strong queens, rear only a few to a hive. Remember that good queens cannot be reared in a strong colony by merely removing the old queen. They must start from the eggs or from larvæ only a few hours old. I well remember a remark a bee-keeping friend made to me some 20 years ago: "I will tell you how to rear nice, large queens; let the bees start them from the eggs." Twenty years experience has verified that assertion.

That artificial queens *can* be reared that are better in all respects than natural ones is a fact well known to me for many years. I have in my mind now a case that will prove the fact as far as it goes. I sold a good, strong colony of bees to a neighbor; well, they swarmed twice, and the young swarms died the following winter. The parent colony did not seem to build up strong again that year. The next year they did not do any better, and the parent colony never appeared to be full of bees. I judged that the bees had reared a poor queen, and during the month of August gave them a young Italian (artificial) queen. The following year the parent colony swarmed twice, and gave 40 lbs. of honey; the first swarm filled their hive and gave 20 lbs., and the second swarm filled their hive and stored 10 lbs. in a box. I make this statement merely to prove to some people that artificial queens are as good, if not better, than natural ones. I can give many more cases of the same kind.

Wenham, Mass.

For the American Bee Journal.

My Experience with Syrian Bees.

I. R. GOOD.

I have been requested by Mr. J. E. Lay, of Texas, and others, to give my experience with Syrian bees, in the columns of the BEE JOURNAL, which I will do without prejudice, and to the best of my ability. They are crosser than Italians if not very carefully handled. If a colony is made queenless and kept so any length of time, there will laying workers appear and fill the combs with eggs. They will not stick to the combs in handling as well as the Italians, but while they have those bad qualities, they also have very good ones. The queens are very prolific, consequently, the brood department will be filled with brood by the time the honey harvest begins, and the bees will take to the surplus boxes much earlier than the Italians, and work with a will.

Last season my Syrian bees were the first in the boxes by nearly two weeks, and some of my best colonies had 25 and 30 lbs. of honey ready to come off before the Italians could be induced to commence in the surplus boxes. They have proven themselves, with me, to be a much hardier race of bees, standing the winter much better and are not as apt to spring dwindle as the Italians. They are not hard to introduce a queen to, if they have been queenless a day or two. They will accept a queen even where the hive is full of fertile workers. They are proof against moths and robbers. For fear there may be some that will say I am interested in the sale of Syrian queens, and consequently have an axe to grind, let me quote from others who are not interested in their sale. In the BEE JOURNAL, Vol. 17, page 316, Mr. Whitfield says: "We were fortunate in having 2 of the Palestine queens come through the past winter in good condition to start with in the spring; but as I had Italians that seemed to be in quite as good condition, I thought very little of them at first. About June 1, I noticed they had more than double the bees on the wing than any other colony, and I took a glance at the inside, which showed 12 frames of brood in one and 9 in the other—frames 1 foot square. I now began to watch them with interest; they gave just double the increase, and each colony gave one-half more honey than the best Italians."

In the BEE JOURNAL for 1881, page 323, Prof. A. J. Cook says: "The tongue of the Syrian worker I find, after examining a large number of each kind, to be the same length as that of the Cyprian, and to average 006. of an inch longer than that of the Italians. The Syrians are excellent honey gatherers, certainty equal, if not superior, to the Italians. They are even more sure to repel robbers than are the Italians."

In *Gleanings* for 1882, page 132, A. I. Root says: "The strongest colony in our apiary is the Syrian one we have mentioned; they are almost the only ones that are wintering on natural stores, just because they had abundance of stores without any sugar feeding."

Now tell us your experience in the BEE JOURNAL apiary with the Syrians, as I know you have them. It is the truth in the matter we want. If the Syrian bees are no better, or not as good, as the Italians, we want to know it; and, on the other hand, if we can improve our bees by breeding Syrians or Cyprians, and crossing with our Italians, we also want to know it. The best bees are what we want.

Nappanee, Ind.

[We have, in the BEE JOURNAL apiary, two Syrian queens, supposed to have been properly mated, and several which have mated with Italian drones. Of the former, we have had but little knowledge of one, as it was quite late last season when we received her, but the other was obtained early in the spring. She proved very prolific, and we found her very useful in assisting to build up colonies. They were not fairly tested for working qualities, as the drain upon them for bees and brood was unremitting. Were it not for their irascible disposition, we would think much more favorably of them; but they certainly are much more vicious than any Italians we have had any experience with, and we have been unable to subdue them with smoke. The progeny of the younger queens, mated with Italian drones, appear larger than the full-blood Syrians, and are very docile, while the queens appear to have retained their proclivities for prolificness. We shall further test them this season for their honey-gathering qualities, in comparison with Italians, Cyprians, Southern brown bees, and hybrids of the different races.—ED.]

For the American Bee Journal.

Heddon's Honey Board.

JAMES HEDDON.

On page 156 of the BEE JOURNAL for March 8, Mr. Funk asks for a description of my honey board. Not quite liking your description of it, Mr. Editor, please allow me to do so.

"When I was a boy," away back in the "dim vistas" of the past, discussions about honey boards were in order and operation through the columns of the monthly BEE JOURNAL. Some stoutly averred, and all agreed, that honey boards between boxes or upper sets of frames, and the brood frames, were a great convenience, because they prevented the bees from sticking the frames together.

But some there were, who said that the honey board isolated the surplus department from the brood chamber to so great an extent that the bees would not obtain as much surplus as when these boards were not used. But Mr. Langstroth, in his book and specifications of his patent-claims pretty plainly told us that bees would put their surplus honey readily into any department where the "heat and odor" of the hive readily permeated. Inspired with this welcome and reasonable announcement, I set about constructing a honey board that I thought best adapted to the principles laid down. There is, sometimes, great convenience in placing hives on top of each other, with no board between. A super constructed properly for so doing must come down no lower than the bottom of its frames; then, when set upon the lower story the bee space above the lower frames, is the only and perfect bee space between the 2 sets of frames. Now, a flat honey board would touch the upper set of frames, whose bottom bars would be glued fast to it. This fact caused me to devise what I named my "sink honey board." I will describe it as nearly as I can:

Suppose your hive and super is made of ⅞ thick lumber. Make a frame the size of the top of your hive, let the material of this frame be, end pieces, ¾x⅞; side pieces, ¾x½; rabbet these end pieces ⅜x⅜ on one corner; nail the side pieces to the end pieces, keeping the ¾ way of all pieces up and down. Now, I will suppose you have an 8 frame hive, (you ought to have, and a Langstroth frame at that), lay this frame on your bench rabbeted side up, have prepared 9 pieces that will reach lengthwise of the inside of your frame, and rest into the rabbets beside. They should be ⅜ thick, and wide enough so that when laid in and nailed as follows the 8 spaces between them will be just ⅜, nail the first one snug up to one of the side pieces, and the last one snug up to the other side piece; nail the side piece to this slat with one nail in the middle, on both sides. Now, when all are laid in and placed so that you have a board with 8 ⅜ spaces running lengthwise of it, when you place it on your hive you will see that each space comes exactly over the middle of the top bar below. When you placed this honey board upon your hive you turned it over, and found that your slats were ⅜ lower than the sides of the board, so, now, if you place your super upon it, though the frames of this super come down flush with its bottom, there will be a ⅜ space between them and this "sink honey board." As the slats of this board break the direct opening between the lower and upper stories, no bits of comb are built up through, and the upper frames (which should rest on a metal rabbet, but have no metal corners) move up by simply picking them up. No bees can be crushed when replacing them, as the lower space is always clear of all pieces of comb. You see that with this arrangement the heat and odor of the brood chamber is in no way retarded.

I use the same board for sections, only I add to it ⅜x½ inch cross pieces (as needed, according to the length of sections) so that the sections rest on them just at their ends, and leave bee space under all the rest of their entire length. These sections pick up clean of all dropping bits of combs, and hence remove readily, and come off clean and nice. I have used this board for comb and extracted honey for more than ten years, and when I say that they are in no way any detriment to the amount of surplus honey received, and are highly in favor of its neatness and appearance (if comb), and the convenience of the apiarist, I have no fears but what the future will verify the statement.

Dowagiac, Mich.

For the American Bee Journal.

Over-Stocking and Marketing Honey.

O. M. BLANTON.

After the sale of 25 colonies, I commenced last spring with 315. Our income up to October 15, was as follows: Extracted honey, 10,359 lbs., $744.46; comb honey, 2,295 lbs., $331.97; beeswax, 64 lbs., $12.80. Total, $1,214.23. Add 25 colonies at five dollars, $125. Total, $1,214.23.

From the above you will perceive that my comb honey sold for about 14½ cts., and my extracted for about 7½c. My average yield per colony was about 40 lbs., and average profits about $3.45. I lost only 1 colony from absconding, and increased to 326 colonies. A considerable amount of wax was used for the barrels, and all irregular section combs, after being extracted, and pieces of drone comb cut from the brood chamber, were tied in Langstroth frames and placed in the upper story.

I will now add in this report that of my friend, G. C. Vaught. Mr. Vaught's report is taken from the account of sales by his merchant, and the entire yield is from 32 colonies: Comb honey, 2,877 lbs., $513.03; extracted honey, 200 lbs., $20.00. Total, $533.03. His extracted honey yielding 10 cts. per lb., and comb honey 17 4-5 cts., average yield per colony, 96 lbs. Profit, $16.65.

Mr. Vaught shipped all of his comb honey to St. Louis, but sold his extracted at home. He lost 6 swarms from absconding and increased to 40 colonies. After the 15th of August he did not extract honey from the lower story. He uses the same pattern of hive that I do, and has only 2 colonies of Italians. All of my apiary is located within 2 acres in the town of Greenville, 600 yards from the Mississippi river. Mr. Vaught's is located 4 miles from the river in the country, and therefore can forage at all points of the compass.

The above reports do not show the net earnings as the cost of labor and packages must be deducted. Mr. V. was fortunate in his merchant, as his and my comb honey was of the same quality and packed in similar cases to mine, and sold at same time—his for 18c., mine for 14c., by a merchant near by. He sold some for as much as 23 and 25c.

From the above it is seen that an locality can be over-stocked; although 300 colonies can be made profitable in this county, especially in a good season. In the past season we suffered from late frosts in the spring, and severe drouth in June, July, and part of August.

Greenville, Miss.

For the American Bee Journal.

The "Call" of a "Strange Visitor."

DR. G. L. TINKER.

As Mr. G. M. Doolittle is reported to be very ill, and, moreover, since he would doubtless treat the impertinent, slurring, and disrespectful article of Mr. Van Kirk, on page 167 of the BEE JOURNAL, with contempt, it may be well for another to notice it. For myself, I must deprecate such an attack, and confess that I felt pained upon reading it. It will not do, in this manner especially, to call in question the honest statements of our foremost apiarists who have so generously, freely, and without reserve, given to bee-keepers everywhere the benefit of their various modes of management, which has contributed so much to make modern bee-keeping what it is to-day. They are not only entitled to great credit and respect, but we owe to them a debt of gratitude. Mr. Van Kirk can ill afford to attack men who have done so much in his behalf.

Mr. Doolittle is not the only one who has made "big reports," nor the only one among skilled and experienced apiarists to suffer serious losses. As to reports, other bee-keepers have made more astounding ones, and yet others have suffered far greater losses in wintering.

Doubtless, if Mr. Van Kirk were to go over the writings of other frequent contributors to the BEE JOURNAL, he might find apparently conflicting statements, which, however, in the presence of all the facts, could be reconciled. But it would profit no one.

I do not care to go over Mr. Van Kirk's article in detail. It is sufficient to note that he is inconsistent; that he has not carefully read Mr. Doolittle's writings, and, above all, that he is not honestly nor respectfully seeking information.

New Philadelphia, O.

[We are quite confident Dr. Tinker gives utterance to the sentiments of many of our readers regarding this class of commentators. Not only is it calculated to wound the feelings of the person criticised, but will have a tendency to deter many eminent contributors from communicating their improvements, or ideas, through the press columns, for fear of malevolent or sarcastic criticism. So long as discussion is confined to courteous and generous debate, much good may be derived from it; but when innuendoes and sarcasm supplant argument and reason, the article inspires disgust rather than admiration. We have exercised our prerogative to withhold several such articles from publication, and are satisfied the writers themselves will ultimately feel grateful to us for so doing.—Ed.]

SELECTIONS FROM OUR LETTER BOX

Long Idea Hives.—On page 139, Mr. Fayette Lee, of Minnesota, asks you which hive will give the best returns—a long one, or a two-story hive? and you answer: "A two--story hive." I have 50 "long idea" chaff hives in my yard to-day, and no two-story hives. I have repeatedly tested them by the side of the long hives for extracted honey with results in favor of the long ones every time. I will give my mode of management. The hives are 36 and 40 inches long—mostly the latter length—made double, with slanting roof. I use a frame 13 inches long by 11 deep, inside measure. When the colony gets large enough to occupy one-half the hive, if the forage is good, I give them the whole length, spreading the brood and putting an empty comb between the whole length of the hive, and when ripe enough to extract, I empty every comb that contains enough to pay for handling, leaving one comb usually to keep the bees quiet. My 50 hives will hold 3,000 lbs., which is quite an item when a person is hurried with other business, as it can remain quite a length of time frequently. My bees last spring were reduced to mere nuclei, and I did not extract at all till they had finished their summer's labor, and then the honey was nicely ripened and mostly capped. Such hives should remain on the summer stands, as they would be quite heavy to move. I would advise Mr. Lee to try both sorts of hives until he is satisfied which is best. But when you say to him that the two-story hive will give the best returns you are much mistaken, in your humble servant's opinion, as far as extracted honey is concerned. I do not see how the Bee Journal can be improved from its present shape—it is intensely interesting now. No dwindling amongst bees this winter. They have had several flights since February 1. Brood-rearing started some in February and no loss to speak of. W. H. S. Grout.

Kennedy, N. Y., March 13, 1882.

[Our answer to Mr. Lee's interrogatory was intended for a hive for all purposes—not comb honey alone, nor for extracting exclusively. It was a general question, and answered as such.—Ed.]

Buying and Smoking Bees.—Please answer the following in the next issue of the Bee Journal:

1. In buying bees, how early in the spring should the purchaser get possession of them?

2. Do those handling bees usually smoke them for all their manipulations? J. R. Craig.

Beatrice, Neb.

[1. The delivery of bees depends much upon locality and season. In contracting, mention is usually made of time for giving possession, as purchasers frequently prefer taking the risk of spring dwindling, in order to have the bees sooner to assist in divisions and strengthening. Then, again, if in cellar, the vender will not give possession till all are on the summer stand, in order to give opportunity for selecting average colonies. Some dealers make a special point of not shipping or delivering till June, unless the contrary be specified, which gives them the advantage of a first swarm, or brood sufficient to nearly make one, which they consider a compensation for risk in wintering and spring dwindling.

2. No; unless quite vicious.—Ed.]

Gathering Honey.—Bees are doing finely, gathering honey from willow, tame China, and locust. I notice in the Journal of the 8th inst., that Mr J. S. Tadlock, of Luling, Texas, dated Feb. 25, says he will extract new honey the first warm days. Now, will Mr. T. please inform me what it is that his bees gather so much honey from, that he can extract so early? My bees are in exactly the same latitude as his, about 150 miles due east. I have extracted about 1,000 lbs., but it is honey gathered last fall. I leave frames in the upper stories all winter, and do not believe in taking all the honey out to make a big report, and then feed back sugar or glucose, and lose half of my bees from starvation. We all know that the old bees die off very fast in spring, and it takes all they can gather for brood-rearing until the flow from linden, wild China and horsemint. I have no swarms yet; am looking out for them now. Weather is fine; peach trees are nearly out of bloom; corn is up ready to plow. Have new potatoes and English peas. Prospects are good for honey. J. W. Eckman.

Richmond, Tex., March 18, 1882.

Early Drones.—Mr. Editor: I send you a few Italian drones; the progeny of a daughter of my imported queen, and the best marked drones I ever saw. Are they as light colored as the lightest? J. S. Tadlock.

Luling, Texas, March 14, 1882.

[We have the drones in a bottle of alcohol, to compare with other specimens we have in the museum. They are very fine, but not as purely yellow as several specimens, some of which have been here for 3 years. They are not as fine as those we exhibited in Italy in 1849.—Ed.]

Clipping Queen's Wing.—Please inform me how and the proper time to clip queens' wings; also, how to proceed to Italianize an apiary? I have 1 colony of Italians and 14 of blacks, and wish them all Italians.

Earlville, Iowa. A. L. Conger.

[During fruit bloom, or early white clover, we have found the most convenient time for clipping a queen's wing. By lifting a frame gently from the hive, so as not to frighten the queen or anger the bees, with a small pair of scissors and a steady nerve, the wing can be clipped off without the queen scarcely knowing it. If, however, you are nervous in movement, better lift the queen by grasping her gently at the fore part where the wings join the body, and deliberately cut off about one-third of one wing. Care must be observed not to grasp her by the abdomen.

The great majority of your bees being blacks, you will have to cut out the drone comb very closely from the blacks, then stimulate your Italian colony rapidly, both by stimulative feeding and giving sheets of worker brood from your black colonies; then insert drone combs to get drone eggs and brood as soon as possible. When you have Italian drone brood capped, remove the queen into a black colony, and let the Italian colony build queen cells. When these are ripe, remove your black queens, or form queen-testing nuclei from your black colonies, and thirty-six or forty-eight hours after graft in the queen cells. If you have been successful in forwarding Italian drones, and suppressing those from the blacks, your work will be easily accomplished; otherwise, it will be quite difficult.—Ed.]

Wintering Well.—The winter has been very favorable for our bees so far, whether on summer stands or in cellar. Last winter my bees were left on the summer stands in very open hives; in fact, they were so open at the sides and top that I expected to lose all of them before spring, but out of 18 I only lost 2 colonies; they were in box and log hives. When the season opened last spring I transferred them to frame hives, and increased to 25 by using foundation comb (Dunham), putting it in with Goodrich's fastener. This machine works nicely and places the foundation solid in the center of the frame. I was very successful with the foundation; not one sheet dropped, and I put in large swarms. What were once log and box hives, now have frames, so that I can handle them with some pleasure. I have them in the cellar, with the tops raised and bottoms open; they seem to be very quiet. Should they be put out for a fly, or leave them until spring opens up, so that they will not have to be put back in the cellar? W. H. BECKWITH.
Saybrook, Ill.

[If the bees show signs of uneasiness, put them out for a fly; otherwise, let them remain in the cellar while all is going well—"let well enough alone," is an old maxim as applicable to bee-keeping as anything else.—ED.]

Ninety Colonies in the Cellar.—Have had 90 colonies in the cellar since Nov. 24; a few show signs of dysentery; 2 in the open air are quite strong. Bees in this section have wintered well. J. C. THORN, M. D.
Streetsville, Canada.

Good Bee Pasturage.—I have 57 colonies and cannot get along without the BEE JOURNAL. The last was a poor season for honey in this locality. My bees are in good condition. We have one of the finest localities in the State for bee pasturage.
HEZEKIAH SMITH.
Fredericksville, Ill.

The Season, Smokers, etc. — The opinion of many writers for the JOURNAL is that we shall get a large crop of honey the coming season. I suppose they base their opinion on the condition of bees at the present, but we should not shout too loud until we get nearer the clearing; we have a spring to contend with, just ahead of us; then comes the harvest. Farmers in this vicinity are all expecting a very light crop of grass; they say that the winter has been very unfavorable for the meadows; that timothy and clover have "winter-killed." The roots are on the top of the ground, thrown out by the frost. Bees are in splendid condition; that is good so far, but if white clover is killed out, we cannot expect a very large surplus. In No. 9, page 137, Mr. T. F. Bingham has an article entitled, "A Partial Review." I think the action of the Northeastern Bee-Keepers' Association must have touched him in a sore spot. Be that as it may, I do not desire to keep rasping on a sore spot, when one is found, so I will try to heal it up. Mr. Bingham in his remarks, brings me in, and all I want to say is that if I understand the case, I do not wish to take back what I said, but to reiterate it in fully as strong language. I understand that Mr. Quinby was the first to get up a practicable bellows smoker, and I believe he is accorded that by all. I am informed that Mr. Bingham got out a patent on bellows smokers; I do not know what the patent covers, but I am told that he came down and forbade L. C. Root and others from manufacturing the bellows smokers. My point is this, if Mr. Bingham patented what others had invented, and tried to stop others from making, I condemn such in the strongest terms; but if Mr. Bingham's fertile brain has originated anything that is worthy of a patent, he is entitled to all its benefits, and I will hold up both hands to sustain him or any other man in his or their rights. W. E. CLARK.
Oriskany, N. Y., March 17, 1882.

Beginning. — I am commencing with bees here, and have 8 colonies, and will report progress hereafter. There are quite a number of amateurs here and all need such instructions and help as the BEE JOURNAL gives.
Boulder, Col. C. P. WALDRON.

Answered to Roll Call.—On the 18th inst. my 21 colonies answered to roll call. My apiary is in my yard, which contains about one acre, and is well set in blue grass and beautifully arranged shade trees and shrubs. In the southeast corner of my apiary, where there are no hives yet, I put some boards and set some troughs on them in which I put syrup made of pure A sugar, and then placed a layer of dry corn stalks on the syrup. At 10 a. m. I procurred a few coals on a shovel, and put a little piece of old comb on the fire, and in less than 3 hours the syrup was all gone clean and dry, and only 3 dead bees left at the troughs. They put in the rest of the day bringing pollen from the maples and elms, which are plentiful here, and in the evening I found that colony No. 8, was robbing colony No. 4. They would not let any others rob them but No. 8. They would fight all others, and all winter this colony No. 4 was uneasy, and at times acted like they would swarm, so I examined them and found that No. 8 had all the honey, and both are strong colonies of bees. I then took the brood chamber of No. 4, and set it on top of the brood chamber of No. 8; they remained there about 20 minutes; I then took it off; the bees had gone down into No. 8, and left their queen alone above. I then examined her and found her to be a deformed, unmated young queeen with 1 leg off. I killed her and the bees united and went to work without any trouble. My 20 colonies are now hatching young brood. The prospects are good, although too much rain. R. M. OSBORN.
Kane, Ill., March 20, 1882.

A High Fence.—I think Mr. Casson is right regarding the high fence around the apiary. I had a colony that got to robbing last season. There was an orchard in their line, and some of the bees in coming back would go around the orchard instead of going over it. I wish to make some foundation for section boxes. I have a set of dies, but do not know how to prepare the sheets to be pressed. Will you give me light on the subject?
H. W. CLEVELAND.
North Sheffield, O.

[Nearly every manufacturer has, from experience, acquired methods peculiarly his own in some of the details of preparing sheets for the rolls or press. Until quite recently, the method was generally to dip a sheet of galvanized iron or thin wood into a boiler of melted wax. Care must be taken that the wax is about the right heat, and the dipping plate or board is kept cool by immersing in cold water before putting it in the hot wax. A solution of soap bark, as it is called, and which may be procured from nearly all druggists, is used in washing the plate or board, and especially the edges to prevent the wax from sticking, after they have been unused for some time. Some little practice will be required to make everything work smoothly and satisfactorily.—ED.]

Improvements in Bee Hives.—I hope the bee hive question is not too hackneyed to merit special and general discussion at present. I have given the subject much consideration, and would like to have the question fully discussed, for it seems to me that important changes are imminent.
Montpelier, Vt. A. WEBSTER.

Good Increase.—In the spring of 1880 I commenced with 4 colonies of black bees. I transferred them to frames 8½x15 inches, with success for a new hand. Increased to 10 in fair condition, but lost all but 2 weak colonies in the spring of 1881. In May I bought a colony in a box hive, and on transfering them found the combs full of brood. This colony started me up afresh, and I increased to 12 good-sized colonies, and obtained 50 lbs. of honey in 1 lb. sections. Of these, 5 strong colonies were left on their summer stands, in double boxes filled with sawdust all around, and lime cushions over them, which were covered with cut straw, and corn-stalks set all around. The 7 lighter colonies were put in an 8x16 cellar under the house, partitioned off from the other cellar, with a 4 inch pipe under ground. I bored 3 holes in the floor under a partition, which takes the dampness up to the rafters of the house, and by which it escapes. The bee cellar is always fresh. I put the bees in the 18th of November. They seem to like it, and are very quiet.
Matteson, Ill. A. WICHERTS.

Bee Moths.—I have been over the country considerably in the last three days, and have not failed to pay my respects to the blessed bee. I have not found a dead colony, but few moths, and plenty of honey. This has been a remarkable winter for the preservation of the bee. The ignorance that is prevalent concerning the natural history of the bee is distressingly conspicuous, and no amount of argument can induce them to subscribe for a bee paper or make any move to enlighten themselves. Every intelligent person that keeps bees for profit will have to make the business a study, and the beginner will find many mysteries, and will be under the necessity of asking many questions, and as I am a very recent beginner, I will ask a few questions: 1. What is the technical name for the moth? 2. How long in the year may we expect to find it? 3. What time in the day may we expect to see it? 4. How does it get in the hive? 5. What is the remedy? WM. T. STURGILL.
Pickering, Mo., March 6, 1882.

[1. *Galleria cereana.*

2. From early in spring till late in the fall, if colonies are not strong.

3. You will frequently in summer, especially toward evening of a warm day, see white or cream-colored moths, sometimes called millers, nearly an inch long, suspiciously numerous around the hives.

4. They frequently enter the hives at night, or in the morning or evening. They sometimes deposite their eggs in cracks around the hives, from whence the larvæ enter the hives, and take up their quarters in the combs. These attain nearly an inch in length.

5. Keep your colonies strong. They can be exterminated from the combs, by placing the latter in a small, close room, and sulphuring thoroughly three times at intervals of six days. —ED.]

Blizzard.—We have a regular "blizzard" here—this is the second day of it. We have 2 inches of snow on the ground now. JAMES HEDDON.
Dowagiac, Mich., March 22, 1882.

[It is better to have it at this time rather than later. It will not be injurious now; two or three weeks later it would cause sad results. As we write (on March 24th) the weather is balmy in Chicago. Very soon the air will be filled with the melody of the feathered songsters, the earth will be decked with "living green," the bursting buds will unfold their beauteous forms, yielding generous perfume to man and honey for the "blessed bees," and all nature will be clothed with loveliness. Is not the prospect soul-inspiring?—ED.]

Bees Do Not Puncture Grapes.—I have seen much upon the honey bee and grape question. Those who say that bees puncture grapes have never investigated the subject, or, if they have, it was about like a doctor in my neighborhood who went to inspect a gravel pit. He went to the hill, took up some quicksand in his fingers, felt of it, and reported "good gravel and lots of it." To tell the truth, there was no gravel there. This is about the way the bee is found biting grapes. Some of the grape men are about like the doctor with the gravel. I doubt very much if they could tell a bee from a yellow jacket. If they will investigate as I have done, and tell what they see, we will hear no more of this nonsense. The first dry summer and fall I want these grape men to get a No. 1 microscope, and go to the vines quite early in the morning, and stay all day, when you will see that the bees wait till the leaders come. They will see bumble bees, yellow jackets, hornets, sweat bees, birds, and worms so small you can hardly perceive them. Watch the wasps and count how many grapes she stings in one hour, and see how the bees follow and suck the juice. The wasp gets none, as the bees follow closely and crowd it away. Keep the wasp and the others mentioned away, and there will be no more grapes punctured. Catch one and let it sting half the grapes in a bunch, and see how quickly the bees suck the stung grapes and leave. W. D. SMYSER.
Ninevah, Ind.

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Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

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☞ To any one sending two *new* Weekly subscribers for a year, we will present a volume of the BEE JOURNAL for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our *new* subscribers will be pleased to learn that they can get it for $1.00, by sending for it *at once*, before they are all gone.

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Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

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Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

CLUBBING LIST FOR 1882.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A. I. Root)	3 00..	2 75
Bee-Keepers' Magazine (A. J. King).	3 00..	2 60
Bee-Keepers' Instructor (W. Thomas)	2 50..	2 35
The 4 above-named papers	4 50..	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A. G. Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 7 above-named papers	6 30..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman)	2 40..	2 25
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

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Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., March 27, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 8c. for dark and 10c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 22c. for good yellow wax, on arrival; 18@20c. for medium grade, and 15@17c, for dark.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

HONEY—The demand for comb honey is slow, and prices nominal at 16@20c. on arrival. Extracted honey is in fair demand. Our jobbing prices for 1 lb. jars of clover honey are, per gross, $25; for 2 lb. do., per gross, $42. The demand for manufacturing purposes is very good. We pay 8@10c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb honey is very scarce and commands 22@25c. per pound. Other grades, partly dark and dark are very slow sale. Extracted firm at 9@12c., according to quality and style of package.

R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—There is a liberal supply of honey here for which trade is very little demand, and prices rule weak and irregular.

We quote as follows: White comb, in small boxes, 18@19c; dark, in small boxes, 12@14c. Extracted, white, 10@11c.; dark, 7@9c.

BEESWAX.—Prime quality, 21@23c.

THORN & CO., 11 and 13 Devoe avenue.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

SAN FRANCISCO.

HONEY—Reports from apiarists in the Southern part of the State give very encouraging prospects for the coming season. These prospects are, of course, subject to contingencies favorable or otherwise, later on. Market is quiet and stocks very light.

We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8¾@10c.; dark and candied, 7@8c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Strained dull, at 8@9c.; no comb here to speak of—worth 18@22c.

BEESWAX—Stiff at 20@21c. for prime.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—The market remains unchanged: 1 and 2 lb. sections of No. 1 white are in regular and quick demand at 21@22c. No. 2 white has dragged a little of late, but took a lively start to-day at 20c. cleaning out all stock on hand. Buckwheat no sale. Extracted is quite active at 12c. for small and 11c. for large packages.

BEESWAX—25@30c.

A. C. KENDEL, 115 Ontario Street.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

RATES FOR ADVERTISING,

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements for the Weekly as follows, if paid in advance:

For **4** weeks		**10**	per cent.	discount.
" **8** "		**20**	"	"
" **13** "	(3 months)	**30**	"	"
" **26** "	(6 months)	**40**	"	"
" **39** "	(9 months)	**50**	"	"
" **52** "	(1 year)	**60**	"	"

Discount, for **1** year, in the Monthly alone, **25** per cent., **6** months, **10** per cent.

Discount, for **1** year, in the Semi-Monthly alone, **40** per cent., **6** months, **20** per cent,

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

Transient Advertisements payable in advance. —Yearly Contracts payable quarterly, in advance.

THOMAS G. NEWMAN,
974 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

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A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

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☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

To Promote a Vigorous Growth of the hair, use Parker's Hair Balsam. It restores the youthful color to gray hair, removes dandruff, and cures itching of the scalp. 11w5t

The Apiary Register.

As the time is now at hand to commence the use of this valuable book, all who intend to be systematic in their work during the coming season, should obtain a copy and commence to use it. We give the following notices by the bee papers of America, which most thoroughly endorse its use:

"Every bee-keeper should have a good understanding of the condition of every colony of bees in his apiary; he should also become aware of the superior and inferior qualities of his bees, and know the colonies to which these traits belong. He should record the amount of honey, in pounds, which is taken from each colony and thereby learn which colonies are the greatest honey gatherers, and therefore the most profitable. He will thus be enabled to learn and decide for himself which queens will pay him the best to breed from, and how such queens look—whether the color or size decides in any way the superiority, and more than one question which is harrowing our minds to-day, each may settle for himself by the following bee-keeping in a systematic and orderly way. When such a day comes we predict a more harmonious and satisfactory time for bee-keepers. We have long urged the need of systematic bee-keeping, and one of its necessities has been brought forth by T. G. Newman, of Chicago, from whom we have received a copy of the Apiary Register, which was devised to contain a complete record of each colony in the apiary. The book is leather bound and well gotten up."—*Bee-Keepers' Guide.*

"The latest thing out in the way of convenience for systematizing work in the apiary, is an Apiary Register book, gotten up by Mr. T. G. Newman, to whom we are indebted for a sample copy of the work. Two pages of the book are devoted to each colony, with rulings and proper headings, so that a glance will give a complete history of the colony. On the front pages are plain directions for using the Register, with two sample pages, showing how to fill up the blanks."—*Kansas Bee-Keeper.*

"APIARY REGISTER.—We have just received one of friend Newman's Apiary Registers, and we must say we are delighted with it and wonder how us bee folks got along without it. The one we have is for 100 colonies of bees, with something like 220 pages; there is one page devoted exclusively to the colony on general principles, bees, honey, etc. Then the opposite page is devoted exclusively to the queen, and in the back there is sufficient number of pages devoted to the cash account, so the whole business of your apiary can be kept together. It also has a page and a half devoted to things worth knowing. A complete glossary, and a nice little table of abbreviations. It is neatly bound in full sheep, and one book will do a single apiary for 2 or 3 years."—*American Beekeeper.*

"The Apiary Register, published by T. G. Newman, is a book that fills a long-felt want, and one that every apiarist should have. Two pages, ruled and printed, are devoted to each colony, it being so arranged that a single glance will give its complete history. It is strongly bound in leather, and of very convenient size, being small enough to carry handily in the pocket."—*Bee-Keepers' Instructor.*

"We are indebted to Mr. Newman for a sample copy of his *Apiary Register.* This is something new and fills a needed want in the bee yard. The one we have is calculated for 100 colonies and is so complete in its systematic and condensed arrangement that the whole story of each is told on one leaf about 4x6 inches—which makes a book for 100 colonies ¾ of an inch thick. Can be carried in the bee-keepers' pocket without any inconvenience. Thus he can know the exact condition of any colony in a moment. It has only to be seen to be appreciated."—*Beekeepers' Exchange.*

For 50 colonies	(120 pages)	$1 00
" 100 colonies	(220 pages)	1 50
" 200 colonies	(420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

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☞ We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal.

◆

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

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☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

◆

☞ It is a fact that horse dealers are buying horses with ringbones and spavins, because they can make money by using Kendall's Spavin Cure. 9w5t

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"How do You Manage," said a lady to her friend, "to appear so happy all the time?" "I always have Parker's Ginger Tonic handy," was the reply, "and thus keep myself and family in good health. When I am well I always feel good natured." See other column. 11w5t

ITALIAN BEES AND QUEENS.

Full Colonies, Nuclei, Tested and Untested Italian Queens, bees by the pound. I guarantee safe arrival. Address, **OTTO KLEINOW,**
13wtf Opposite Fort Wayne, Detroit, Mich.

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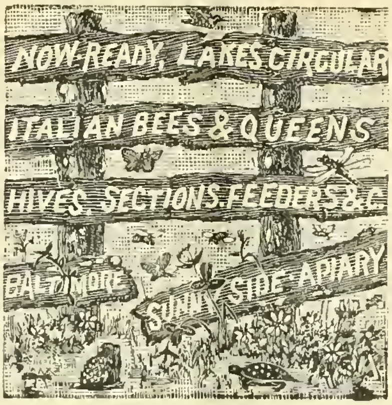

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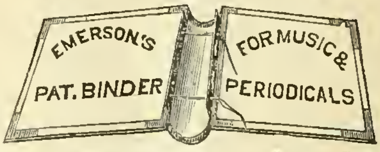

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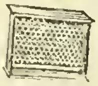

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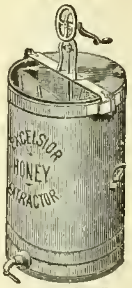

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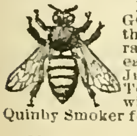

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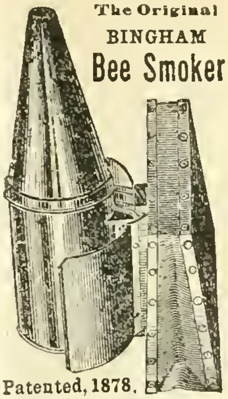

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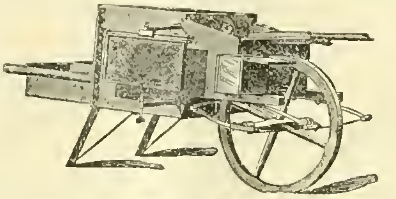

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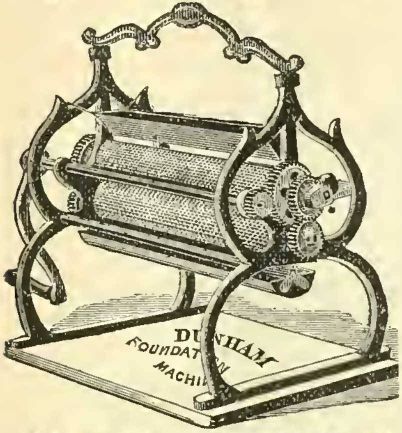

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Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. This contains many useful hints.—Price **15c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

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Chicken Cholera, by A. J. Hill.—A treatise on its cause, symptoms and cure. Price, **25c.**

Address,

THOMAS G. NEWMAN,

974 West Madison Street, CHICAGO, ILL.

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.......... 209
Preparation of Honey for the Market..... 209
Bee Pasturage a Necessity.......... 209
The "Conqueror".......... 209
A Reversible Frame.......... 209
Artificial Comb Honey, Beeswax, etc...... 210
Artificial Swarming.......... 210
A House Apiary in Italy.......... 211

Among Our Exchanges—

Too Much Honey.......... 211
Queer Industries in New York City.......... 211

Correspondence—

Bacterium—Its Relation to Dysentery..... 212
The Coming Bee—Its Production.......... 212
A Standard Frame.......... 212
Heddon's Reply to Messrs. Demaree and Casson.......... 213
Yellow, or Leather-Colored Bees.......... 214
Do Bees Excrete a Dry Powder?.......... 214
How the Grapes are Destroyed.......... 215
Lower versus Upper Ventilation.......... 215

Convention Notes—

Local Convention Directory.......... 216
Convention Notices.......... 216
Spring Management of Bees.......... 216
Bee-Keeping in Maine.......... 216

Selections from Our Letter Box—

Artificial Comb Honey.......... 217
Prospects Cheering.......... 217
The Secret of Success.......... 217
A Voice from Egypt.......... 217
Honey from Maple Blossoms.......... 217
Brood-Rearing in Wired Cells.......... 217
More About Mrs. Cotton's Transactions.. 218
Queens Behind Division Boards.......... 218
How I Use the Bee Journal.......... 218
My Misfortunes.......... 218
Combs Destroyed by Moths.......... 219
Honey from Corn.......... 219
Feeding Maple Sugar.......... 219
Color, Pleasure and Profit.......... 219
Bokhara or Sweet Clover.......... 219
Grease in Foundation.......... 219

Special Notices—

Binders for 1882.......... 220
Clubbing List for 1882.......... 220
Honey and Beeswax Markets.......... 220

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. This is a new pamphlet of 32 pages which we have just published. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

The "Conqueror."—We have received from Messrs. Bingham & Hetherington a sample of their large smoker, which they call the "Conqueror." It certainly possesses capacity sufficient to conquer the worst colony of hybrids that can be found. The stove or fire-pot is 3x7 inches, with a chimney 7 inches high, and bellows in proportion. Almost any body would be justified in making a *great blow* with this smoker.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

☞ On Friday, March 24th, America lost her most distinguished poet by the death of Henry W. Longfellow, at the ripe age of 75 years. For fifty years his sweet and tender poems and charming stories have been read and re-read by the people, and they were enjoyed by rich and poor, learned and unlearned alike.—*Ex.*

A Reversible Frame.—J. S. Duncan, of Browning, Mo., has sent us a sample of his reversible frame for bee hives. Accompanying it is the following description, which will give as good an idea of it as we could do:

By the loose link at each corner and the movable arm the frame is reversible, and with the square frame, sides or bottom may become top, for the frame the pieces are all cut one length, and the one nailed on the other; this is for hives with rabbets. The triangle link is hung on the accompanying hooks, properly spaced and driven into the side of the hive, making the hive simpler and easier of construction. To keep the frames from swinging against each other, I use a thin strip of wood with wire drawn through the proper distance, and fastened to the bottom of the hive. The links are made by having a piece of wood or iron the shape you want the link, roll the wire around and cut.

◆

☞ A correspondent in North Carolina wishes to know how to prepare bees in the Simplicity hive for transportation by rail, to hold frames steady, etc., which we briefly answer: Prepare a bottom gauge, by using a strip ¾ of an inch thick by 1 inch wide; let this be as long as the hive is wide; saw notches to the number of the frames, in which to fit the bottom bars to hold them steady; now set the frames in firmly, spread them properly, and drive a 1½ inch wire nail in the lug at each end of the top-bar. Cover the whole hive (if the weather be hot) with 16-mesh wire cloth; put 3 strips (1 at each end and middle) of inch lumber by 2 inches wide, crosswise; fold a cotton cloth 8 thicknesses, dampen it and tuck under one strip, then at night close the entrance tight. Properly mark it, on top, "Live Bees—this side up; keep out of sun and rain." If weather be cool, use much wider cross-blocks on top.

Artificial Comb Honey, Beeswax, etc.

Mr. H. S. Hackman, of Peru, Ill., propounds below a few questions relating to the beeswax production of the United States. Short and pointed as are the questions, but slight reflection will be required to convince the reader of their importance:

> I have received a letter from Mr. R. A. Burnett, commission merchant in Chicago, in which he says: "Happening to pick up the BEE JOURNAL of this city, I noticed your communication on comb honey. It is true that many people think all the nice comb honey that they see in my store is manufactured and tell me so daily; I am often so weary of the effort to convince them of the impossibility of its being manufactured, that many are allowed to deceive themselves. Perhaps that is better than that they should think I lied about it." This corroborates my last article on artificial comb honey. Will you or some of your contributors please write an article on beeswax, and answer the following questions: 1. What is the wax product of the United States annually? 2. What is the principal use wax is employed in or for? 3. Can any other product or substance be substituted for beeswax? 4. What will be the commercial value of wax, as scientific bee-keeping advances? 5. Can a progressive bee-keeper afford to sell wax at 20 cents a pound?

1. There are no data for arriving at the wax product of the United States with anything like precision. Several years ago, with the information then at hand, we estimated the beeswax product of the country to be about 3,000,000 pounds, which, at 20c. per pound, would amount to $600,000.

2. For wax candles, artificial flowers, medicinal uses, varnishes, and many other purposes. The most of it, till quite recently, has found a foreign market, since which there has been a ready market at home for nearly all the beeswax produced.

3. Yes, in many ways; it is largely mixed with cerasine, paraffine, and perhaps other substances, for various purposes. Much of the bleached beeswax of commerce, and white wax, is composed principally of cerasine or paraffine, and in many cases they have entirely supplanted beeswax. We do not believe, however, any substitute for it can be used in the apiary, or any adulteration practiced with economy, for purposes in which it is to be brought into contact with the bees. Several attempts of this kind have been made, but they always resulted in failure so far as we have been informed.

4. It is impossible to foretell. Perhaps its value will not advance proportionately with the decrease in production, owing to the employment of cheap substitutes for it.

5. No, as compared with the price of honey, and the ready market being established for the latter. Probably, in the near future, the majority of the wax production of America will be consumed in the manufacture of comb foundation, and many progressive apiarists will themselves become buyers in the market instead of sellers, as the tendency of progress appears to be to prevent production rather than to encourage it. If twenty pounds of honey, or the time of the bees equivalent to that amount, be required in the making of one pound of comb, certainly no thoughtful bee-keeper will encourage or allow its production if he can profitably prevent it.

Artificial Swarming.

The season is rapidly approaching when the bee-keeper will wish to take every advantage to secure the early flow of honey. Many may have bees in box hives which they do not wish to transfer, either from want of time or timidity, or, perhaps, they may prefer to keep them in the boxes, and to run the swarms into frame hives. For this purpose we suggest the following methods of artificial swarming, which will be found preferable, we think, to natural swarming, as they are attended with no risk, but little loss of time to the bee-keeper, and scarcely no interruption of work with the bees, as is always the case with natural swarming, occurring as it does just at the time when time is most valuable with them: Select some bright, clear day, when the workers are busily engaged in the fields, remove the hive 10 to 20 feet from the stand, and put in its stead a frame hive, with half or two-thirds its complement of frames filled with bright, clean combs, or good foundation and division boards at the sides; turn the old hive bottom up, and invert an empty box over the open end; now blow in a little smoke from the lower end of the hive, and commence a series of sharp drumming or rapping on the sides of the hive with a small hammer or stick; do not drum hard enough to loosen the combs or start them to dripping; after rapping 4 or 5 minutes, cease for a minute, then resume again, and keep it up for five minutes longer, or until the bees have deserted the hive and clustered in the box, which is a pretty sure indication the queen is with them. Now cover a sheet over the old hive, and empty the bees from the box on a sheet in front of the new hive on the old stand; watch them as they crawl up, to discover the queen; if she goes in, place the old box on a new stand, and your work is accomplished.

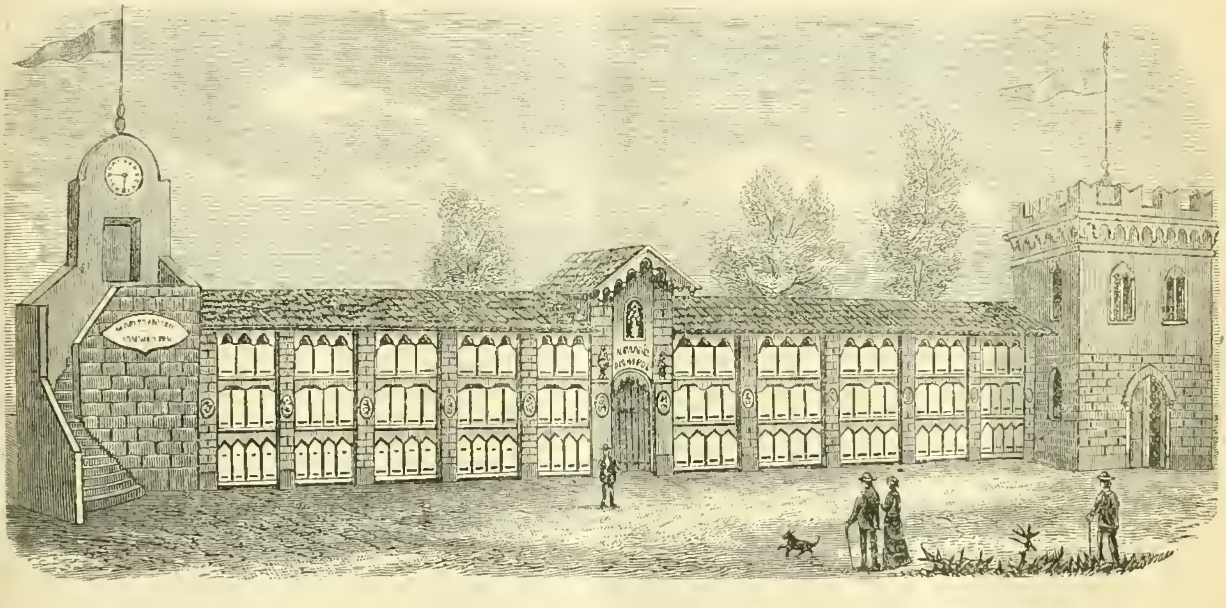
If the bees to be operated with are in frame hives, remove the old hive to a distance, and place a new or empty one on the old stand, when the bees are working busiest; lift the comb on which you find the queen from the old hive, destroy queen cells on it, if any, and place in the center of the new one, with the queen; fill in frames each side filled with clean combs or foundation, proportionate to the strength of the colony, and confine to the center of the hive with division boards; put on the blanket and hive cover; now take the frames one at a time from the old hive, and shake most of the bees off in front of the new hive, destroy all the queen cells in the old hive but the two best, or give them a laying queen after destroying or removing all the cells; put in an empty comb or frame of foundation in place of the one removed to the new hive, spread the blanket over, or put on second story with sections or extracting combs, and place the hive on a new stand well removed from the old one. The above methods are usually an effectual cure for "swarming fever," and interferes but a few hours with work.

Another method which can be practiced with good results, is to examine the colony threatening to swarm, remove all queen cells started, then remove the hive to the stand occupied by a very weak colony, and remove the weak colony to the stand formerly occupied by the strong colony. In strengthening and depleting in this manner, however, it is much safer to confine each queen on the surface of a comb in her respective hive for twenty-four hours, to protect her from the returning bees, which sometimes regard her as an intruder. For this purpose a cap from a Harris introducing cage will be found best.

In all cases where foundation or empty combs and division boards are used in dividing or artificial swarming, care must be used to spread the brood chamber and give additional combs or foundation as fast as the bees are ready for it. Use good foundation in preference to doubtful combs.

A House Apiary in Italy.

The Italian monthly periodical, *L'Apicoltore*, published at Milano, Italy, furnishes a long descriptive and historic sketch of the very substantial building to accommodate about 150 colonies of bees with a permanent home, provided by that eminent bee master, Signor F. Bianchi. By the engraving on this page it will be seen that there is an observatory tower and *horloge* (clock) at one end, and a two-story tower and flag staff at the other, with an elevation for a "study" over the passage-way in the center.



Apiary of Signor F. Bianchi, in Italy.

The hives in Italy have doors at the back, for examination and manipulation—the interior of the long building is, therefore, used for that purpose.

The whole building has a substantial appearance and is very attractive not only to the bee-keepers of the surrounding country, but to Italians in general. There the care of bees is a pastime and study for the wealthy and learned, and such a building is a *pride* to its owner; but here, where bees are kept more for the money that can be made out of their labors rather than for a patient study of their habits and peculiarities, such a building is not desirable; and on many accounts would be decidedly objectionable.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Queer Industries in New York City.—The following item, clipped from the Lewis Co., N. Y., *Democrat* of Feb. 23, 1881, was sent to us by Mr. N. F. Case, of Glensdale, N. Y., who wants us to "notice" it:

The investigation of the census men have led to some queer developments in the manufactories of New York and adjoining cities. The largest single industry in New York is that of custom made clothes. The making of paper patterns employs hundreds of hands, and, ten large houses being engaged in it, use tons of paper. There are factories for making dried blood, the dummies that milliners use to show dresses on, theatrical armor and jewsharps. The use of adulterating substances is getting to be general. Castile soap is made of grease and terra alba, or white earth, and which earth is used largely in candy making. Glucose, which is corn starch, is used heavily by the sugar refiners. There is a firm engaged in making honey and honey comb. The honey comb is made by machinery of paraffine wax, and is an exact imitation of the regular thing, except that the bees fashion their cells of walls only 1-125th of an inch wide, while human artificers have not yet become that deft. The cells are filled with glucose, which is the sweet syrup of common corn, and looks and tastes like honey. The cells, once filled, are closed by smearing a hot iron plate over the wax tops, and the product is sold as the "best clover honey." It is in great demand, and outsells the regular honey. Gallons and gallons of the best tomato catsup are made from the tomato skins which are purchased from the great tomato canning establishment.

There are frauds enough to enumerate the real ones, without adding the fanciful stories about fraudulent comb honey, which are but the vague imaginations of some "crank." There is no truth in that part of the item.

Too Much Honey.—The Los Angeles (Cal.) *Times* tells this story:

Eastern people do not always appreciate the scale upon which Californians lay out their work. A case in point, is that of an eastern merchant who wrote to a Los Angeles County bee man for a sample of his extracted honey. His request was complied with, and the merchant was so well pleased with the appearance and good quality of the honey that he sent an order for all the man had like that. The gentleman, thinking the merchant might not be reckoning on the amount he had in stock, wrote him that he had 16 tons on hand, but that he might as well make it 20 tons, which would be just 2 car loads, and that he would ship it immediately. He received a telegram a few days after, saying: "Keep your honey! I only want a case or two."

CORRESPONDENCE

For the American Bee Journal.

Bacterium—Its Relation to Dysentery.

GEO. THOMPSON.

Ever since the BEE JOURNAL was started, dysentery and its cause or causes have been more or less discussed; but of late there seems to be a growing desire to thoroughly investigate this so-called bee disease. Bee-keepers are becoming conscious of the fact that a knowledge of the causes and prevention is as necessary to successful, and therefore profitable bee-keeping, as bee pasturage. I have watched and read with much interest the divers opinions upon the subject, and I think from present indications the time is not far distant when all the facts will be generally understood and settled. I have never taken much stock in the pollen or bacteria theory, because I think the reasons given are not tenable. What is bacteria? According to the well-versed in science in this country, and in Europe as well, bacteria is found everywhere in decay and fermentation, and in looking over the "Library of Universal Knowledge," I find the following description: "*Bacterium*—a minute and low form of vegetable organism, refractive, spherical and mobile. It occurs as a fossil; is found in the sap of plants, in the fluids of men, animals, insects, larvæ and eggs; is abundant in incipient stages of fermentation and decay of animal and vegetable tissues and substances. Bacteria act as a ferment, changing cane sugar and starch to glucose. They are communicated as germs floating in the air; they assist in the ripening of fruit, and in the regeneration of organic matter during the formation of cell structure. They thrive equally well in acid, alkaline or neutral fluids. Many phenomena, otherwise attributed to spontaneous generation, are caused by these minute and omnipresent organisms."

The above, in a very clear and succinct manner, informs us what it is, where it is to be found, and what it accomplishes. It is no reason, to me at least, because bacteria are found in fermented pollen or honey, that they are the cause of dysentery. As well might we say if a man has the same malady, that bacteria was the cause of it because they are found in his food, and in the very air he breathes. As well might we argue that an animal is brought into the same condition by eating decayed vegetables, because they are found there. I consider that this state or condition is brought about, not by bacteria, but by a changed condition of food.

Geo. Grimm, in February *Gleanings*, has an excellent article upon the subject, one well worth reading three times over. And on page 104 of the BEE JOURNAL is an article by Chas. Dadant, one of the best I have ever seen. I believe with him, that diarrhea is a more appropriate term. I have often questioned the propriety of calling it a disease, for in the most of cases a good cleansing flight is all the remedy the bees require.

Geneva, Ill.

For the American Bee Journal.

The Coming Bee—Its Production.

THOMAS BALCOMB.

Not seeing much of late in regard to the "coming bee," I hope the suggestion or two I make will not be out of place. I have taken considerable interest in the articles that appeared from time to time in the BEE JOURNAL upon the coming bee, and I think it hardly advisable to let so important a subject cool down, considering its great importance, and the vast field that is open for study and practical experiments.

I have no doubt that there are many apiarists whose greatest wish is to produce that coming bee, and are working their apiaries with that object in view. But, on the other hand, there are those who ridicule the subject, and think the coming bee will never come. Be that as it may, it is evident that there is a great variety of opinions upon the subject, also upon the qualities of the various races of bees, for there are very many that consider the Italians good enough, and others that can see a superiority in other races over the Italians, and even a few that prefer the black or German bee to the Italian.

As this coming bee must have the desirable good qualities that are now disseminated throughout the various races of bees, and as opinions differ so much in regard to these various good qualities, it may seem difficult to many where to make the starting point to produce this coming bee. I have no doubt that if the matter was left to itself, that in the distant future there would be *Apis Americana* from natural causes, inasmuch as the Asiatic and other races of bees are getting introduced and desseminated throughout the land, they must in the course of time get so hybridized that a distinct variety of bees would be the result, best suited to the climate and surroundings. For any one man to undertake to produce the coming bee, I think would only result in a partial failure. True, the apiarist that can control a considerable area of country can, by a careful selection and crossing, produce a superior strain of bees; but with such a variety of climates and opinions, it is doubtful in my mind, whether the experiments of a few would benefit the apiarists of the country generally.

Still, notwithstanding the many difficulties that stand in the way, I think much good would result by co-operation in which many might participate to help to bring to light *Apis Americana*. I think that if a society was formed of the advanced apiarists of the country for the purpose of accurately testing the good qualities of the various races of bees, then, by a careful system of crossing, I think something definite might be arrived at, but even with the formation of such a society, it will take many generations of bees, and many failures, before anything satisfactory is accomplished; therefore, at present, I see nothing to indicate a near future for the coming bee. That should not deter those that love our interesting occupation from experimenting and improving their bees.

The coming bee must arrive sooner or later. The possibilities of fertilization in confinement are so few, that we can hardly expect any assistance from that source, unless experiments are conducted more extensively, which could be done by the same society. I think success will seldom be reached by those who conduct their experiments on a small scale, such as boxes, barrels or the like, for I think the queen, like the higher order of animals, has her period of heat, therefore to be successful, I think some kind of a structure will have to be erected in which heat and light can both be regulated and so arranged as to accommodate several hives containing the queen and drones to be mated; but each hive to have two entrances, one opening on the inside of the structures, and the other covered with perforated tin, opening on the outside. Even then many failures will result from the queen being able to pass through the entrances that were only intended for the workers.

Luling, Tex.

For the American Bee Journal.

A Standard Frame.

W. J. DAVIS.

The action of the British Bee-Keepers' Association, as reported on pages 179-180 of the BEE JOURNAL for March 22, comes so near my own views of the right size of frames for the brood chamber, that I will take the liberty of reporting my experience with frames.

I have used the standard Langstroth frame for 21 years. I think the depth of frame right (viz: 8½ inches, inside measure). But I am convinced that for this latitude it is too long. It is a point that all skillful apiarists of the colder parts of our country agree upon, that the size of the brood chamber should be contracted, during winter and spring, for the better husbanding of the heat generated by the bees. It is also a fact that when the bees of a colony cluster for mutual protection against the cold, they form as near a sphere, or ball, as their home and combs will admit of, and no one will question but what that shape will expose the least number of bees on the outside of cluster. Now it follows that if the compact cluster of bees be 6 inches in diameter (and such a colony would be considered a good one in the month of March), and the combs be 18 inches in length, from front to rear, they occupy in the greatest diameter but ⅓ the length of the hive when reduced to its smallest size by the use of division boards. The unoccupied part of the combs would remain cold, or warmed at the expense of large consumption of stores. if not in comfortable winter quarters. With this view of the matter I made a frame with 14 inch top bar, making a frame 8½x11½, inside measure. For top bar and ends I use ⅜ stuff, 1⅛ inch wide. I have used them 2 years, and can say that for both winter and summer I am highly pleased with them. I have at present 35 of my colonies in short frames. They are simply the Langstroth frame shortened.

I do not write with the view of having any one adopt the size I have mentioned; neither do I claim that it is the size, but I will venture to predict that for all localities where it is necessary to economize the heat of the hive for 7 months of the year (as is certainly the case in this locality), shorter frames than the original Langstroth will grow more and more in favor with bee-keepers. There are economic reasons for the use of short frames even in warmer latitudes, which I may mention in the future. The Rev. George Raynor rightly says: "The size of the frame does not necessarily fix the size of the hive.

Youngsville, Pa.

For the American Bee Journal.

Reply to Messrs. Demaree and Casson.

JAMES HEDDON.

Probably the discussion of the bee question, and best way of getting better ones, has gone as far as the readers care to go with us. We have had a good time, and I, as one of the disputants, have enjoyed the discussion, if no one else has. I like to read all of Mr. Demaree's articles, because they possess that vigor of expression that the lover of literature relishes. I cannot, however, refrain from making a statement, the truth of which is only equaled by its plainness, which is, that it seems to me Mr. D. is lacking in clearly understanding my premises and drawing logical deductions from them. Perhaps I do not make myself clear enough:

1st. I believe the best bees that have ever been imported to this country are Italians, and that they are the longer-bodied, darker-colored variety.

2d. I believe that while these bees are the best, all things considered together, the brown German bees are in several leading and important peculiarities, superior to them and all others.

3d. I believe that traits in bees are hereditary, and that the better way to get the best bees quickest, is to cross these two races, and in so doing breed in the desirable, and out the undesirable qualities of each, to the best of our ability.

4th. If I can understand the sentences penned by Messrs. Doolittle, Root, Langstroth, Newman, and last, but not least, Chas. Dadant, these gentlemen think about the same. Trusting to the memory of the reader, I do not think it necessary to quote from these writers. True, Mr. Davis, a gentleman of integrity and experience, has returned to the goldens, but yet, if he has not some goldens of far more illustrious habits than the ones I purchased from him some ten years ago, he has yet something of great value to learn.

This country is full of experienced men, such as E. J. Oatman, and the Dadants, who would be very hard to convince that Mr. Davis, or any other man, had any bright Italians equal to the leather-colored variety. He undoubtedly thinks so, but I do not, and cannot, though it is ever so true. I have not had the evidence, and owing to the fact that I have had such a good chance to have it, I doubt its existence. Back numbers of the BEE JOURNAL show that Mr. Dadant understands the argument of Mr. Demaree to be against the virtues of the leather-colored or dark Italians; so do I. Whether these dark bees are pure or hybrids, that they are the best, is the claim that Mr. Dadant and others of us urge. In speaking of Mr. Dadant and myself, Mr. Demaree says: "The only wonder is that a man of his (Dadant's) experience, should be slow to learn that the imported Italian is a hybrid. It is not so surprising, however, that a person holding such views as those propagated by Mr. Heddon should be found in darkness." I shall have to say to this, as the Chicago *Times* did of J. Cook's lecture: "One hundred dollars reward is offered for any man that can tell what Mr. (Demaree) is talking about."

Then he warns me that hundreds of bee-keepers are going right on breeding up to the highest point of excellence, regardless of my opposition. To this I reply: You who have read my views on this subject, tell me, is this lawyer insane?

I can hardly suppose it would become one who believes the golden Italians to be "hybrids in character," to make such a dreadful fuss about a little more hybridizing with so valuable a bee as the brown German, especially when governed by the wisdom of American bee-keepers of the nineteenth century. I did not say that I was "aware" that leather-colored bees were hybrid; I said I suspected it, and wrote so among the first, or was the first. I thought best to leave it to such explorers and experimenters as Mr. Dadant, to become "aware."

Mr. Demaree objects to my witnesses, ostensibly because their names were not given. but perhaps because they do not testify to suit him. I have known lawyers to do just such things. I may have failed, but I have sought to gain a reputation for common honesty where there was nothing at stake at least, and I was led to think that if I said that these men were of experience and well known to be such, and wished their names kept private to save postage stamps and time, that my word would suffice. I think so still. In this respect I am willing to grant to others all I ask for myself. I see no proper comparison between the precision of witnesses in this discussion and a case tried in a Justice court. Does Mr. Demaree not hold some stories as divinely true, whose witnesses lost the cheerful habit of living in this world, some hundreds of years ago? I see no proof sustaining Mr. D.'s premises, from his "live witnesses." I have met and talked with Messrs. Jones and Poppleton, and I have corresponded and heard something semi-occasionally from Messrs. Davis and Doolittle, and truly, I should be surprised if I found on inspection, their bees more yellow than my own. Messrs. Poppleton and Jones run for extracted honey, and they do not miss the lack of comb building qualities in their brightest yellow bees, which they may possess to some extent. None of these men had any special strain of crossed bees to compare side by side in the same field and season.

In what I quoted verbatim from a man of close observation and study, and one who makes honey production his entire business and support, and not a side issue, I showed to all who are willing to credit me with that common honesty which would not fabricate something from nothing, that well bred crosses can "gather a large yield," where there is "but little nectar," or "none to be gathered" by the golden Italians of the amateur.

I wish to thank Mr. Casson for his kind words and manner of giving timely caution, in regard to high board fences, and no one can doubt that his experience in regard to the house proves that house shade on certain days is dangerous to some loaded bees; but it also proves that there is a difference between houses and fences, because, though I have kept my bees for more than one-half of my time in yards surrounded with high board fences, I have never seen the loss of a single bee result from it. We are told that bees make from 4 to 10 trips daily, each; that they can fly from 1 to 4 miles per minute, and that the time is mostly used up in loading and unloading, etc. Now, if you have a yard of ¼ acre in size, and a bee starts from one fence and flies over the opposite one, the elevation is so slight that I think it hardly worth our mention, and those near the fence that is between them and their direction, pass out and into the yard by a circular motion that loses not more than one-thousandth part of the time occupied in that trip. So far as I have ever been able to determine the losses by rise and fall of lines, and shade in cool weather, has been tenfold offset by the gain of shade in hot weather, and more especially by time saved from idle gossipers and thieves, children and stock getting stung, and nervous people fearing the same. When I start another apiary out in the country, perhaps I will omit the fence and use barbed wire, and then if I get twice as much honey, I will let you all know it, by the "brandishing of my little pen."

I am just making into kindling-wood 100 bottom-stands that had slanting alighting-boards. I used them till they were too old to be of service. I used them because I had them. I have made none but square ones for the past 7 years. My bees prefer crawling up, to crawling down hill, loaded or unloaded. (No bred-in trait, they had it when I first obtained them). When one of them would alight just enough below the top of the slant of the alighting board so he could not see over, he would puff a few times and rise on the wing to see if he was surely all right about location. I shall waste no more time beveling boards.

One of my witnesses (the fellow who obtained no surplus from the "goldens of the period,") still enjoys the cheerful habit of living in this world, and writes that he is ready to be cross-questioned upon Mr. Demaree's witness stand. His name is J. Vandervort, Laceyville, Pa.

Dowagiac, Mich.

For the American Bee Journal.

Yellow, or Leather-Colored Bees.

J. A. BUCHANAN.

Quite an animated controversy concerning the color of the Italian bee has been vigorously conducted in the Bee Journal of late, and I am pleased to see it, since, by the discussion much valuable information, and no little fun, has grown out of it. Practical bee-keepers, of unlimited experience, have long since become aware of the fact that the dark, leather-colored Italians are superior in nearly all respects to the light-colored bees. It is true that in selecting and breeding to obtain a light color, an occasional colony will prove to be very good honey gatherers and comb builders, but this is an exception, and not the rule.

Since the summer of 1865, I have been experimenting with the Italian bee. Prior to that time, I felt a great anxiety to test that race of bees, but serving in the army and bee-keeping would not go well together. Since that my specialty has been the cultivation of the Italian bee. For the first ten years I spared neither time nor expense in my efforts to produce a strain of bees that would have no superior as to lightness of color, and at one time it was gratifying to me to have my visitors acknowledge I had the finest colored Italians they had yet seen; but they were a miserable failure in almost all other respects. They were poor comb-builders outside the brood department, were generally light in stores, weak in the spring, and by no means equal to the old black bees. I had my satisfaction in color, but it became necessary in my case to get some profit, and I was about to give up the business, when I was advised by a friend to send for leather-colored stock. This was done, and I soon became satisfied that they were greatly superior to any bee I had yet seen. Here my views of the Italian bee changed again. The first impression I had was that there must be some blood of the German bee introduced into their make-up, and am still of opinion that this strain was procured from districts in Italy where still exists blood of the black race. Although this dark strain of Italians has the appearance of a hybrid whose blood of the yellow race predominates, there is in its nature nothing that would lead one to believe it a cross-bred bee. There is no disposition to become alarmed and rush down off the combs, and quarrel with the operator, as do the hybrids of this country.

For some years I have been experimenting in crossing the blood of the German and Italian bees, and am convinced that by a judicious system of cross-mating the two races with a view of correcting the defects found in both, we can produce a strain of bees having the good qualities of both united in one, and but few, if any, of the objectionable points retained. The German bee possesses some valuable traits not found in the Italian bee, and of course some very undesirable traits, prominent among which is the disposition to allow the moth worm to overcome them at times when weak in numbers, and their annoying habit of dropping from the combs while being handled. Both these, as well as other faults, may be corrected by the introduction of some blood of a strain of Italians possessing great perseverance and gentleness of disposition.

It is my firm belief that the "coming bee" will not be of any pure bred race. To those who are selecting and breeding their very choicest yellow Italians, expecting to produce a strain that will outstrip all others, I want to say, you may spend your whole lifetime at this and then you will have no better bee for profit than you can produce by crossing the German and Italian races.

To advocate the breeding of anything other than the golden-colored Italian, is to bring down upon our heads anathemas, thick and heavy; but as I am an old and confirmed sinner on this subject, and have plenty of good company traveling in the same boat, I have no need to feel alarmed about my wayward condition.

Holliday's Cove, W. Va.

For the American Bee Journal.

Do Bees Excrete a Dry Powder?

WM. J. WHITFIELD.

In the Bee Journal of Jan. 11, 1882, page 26, Prof. A. J. Cook says: "I have never found any support of the theory of the late Mr. Quinby, that bees excrete a dry powder in winter." What I wish to know is this, if bees young or old, when in a perfectly healthy condition, let it be summer or winter, do not void their feces in a dry powder, how then? I have thought they did so for years. I have had bees confined to the hive for over 5 months, so they could not get out of the hive, and when liberated in the spring parted with nothing that I could see, but would leave a large quantity of dry powder on the bottom board. This I always took for their excrement. In my opinion, any plan for wintering that does not look to this end is at fault. I have gone to quite a heavy expense with this end in view with my bee-house, and if it should fail to bring about this result, I shall consider it a failure, for I know I can accomplish it out-of-doors; but with a number of hives it is a great deal more trouble and expense. Now, if Prof. Cook will agree to fix one or more hives this fall as I shall direct, I will give a plan, and he to report the result through the Bee Journal, that will keep bees confined to the hive for 6 months, and at the end of that time, when liberated, will void nothing but a dry powder, and if he wishes to see what they void through the winter he can put a dish under the hive and collect it. I shall put him to some trouble, but not much expense.

The plan is this: Take a bottom board 3 feet square, nail it down on a 3x4 scantling just at the two ends, put this on 2 more pieces; fix it to face the south, the scantling to run east and west in the center of the bottom board; cut out a piece 8 inches square, cover this with wire-cloth as coarse as you can get and not let the bees through; now, from the end of the wire-cloth to the end of the bottom cut out ⅜ inch deep by 8 inches wide, for an entrance. If you have not a close-end frame hive, you had better use a box hive, for you must not let the bees get off the combs, as they will surely do if you use any of the hanging frames that I have seen; the hive must be not less than 1,800 square inches; 2,000 would be better; must be filled with combs and bees, and have not less than 35 lbs. of good honey. On the first of September set the hive on the bottom board just over the wire cloth; have it fit tight down on it all around, put a piece of board on over the entrance where the ⅜ was taken out, to come from the hive to within 1 inch of the front, put a 3 foot square box on the bottom board. This must be 3 feet high, well made, so that it is tight; fill this in with dry sawdust. It must be dry, well packed down, and well covered. The finer it is, the better. Put a piece of board on under the wire-cloth; have it fit tight. It will be well to rub a piece of tallow on the wire-cloth, or the bees might wax it over; now leave it entirely alone. Let the bees wax it up tight all around the bottom, top and sides; let them carry in all the pollen they wish to. About the middle of October close up the entrance tight, and take away the board under the wire cloth, to give the bees air. Have another box ready to put over the first, just 1 inch larger, made tight and well covered; let it come down just 3 inches lower than the bottom board and rest on the same pieces that the 3x4 scantling does; keep it up 2 or 3 inches from the ground, to let the air pass freely under all. Do not touch it again till the yellow willow is in bloom, then just at dark take away the outside box, open the entrance and let the bees out, clean all dead bees or dirt there may be in the way, so you are sure they are free to get out, put on the board under the wire-cloth and get up the next morning to see them fly out. I think you have got the powder all right, and that the bees will void nothing on flying out fisrt.

The idea is to prove or disprove the theory of Mr. Quinby, and as we let the bees wax all tight but the wire-cloth, we must keep them warm and dry outside of the hive. Have it so they do not know when the weather changes, let it be hot or cold. The bees will send all the moisture out below, if they do not feel the cold above or on the sides.

Dundas, Ont.

For the American Bee Journal.

How the Grapes are Destroyed.

M. RICHARDSON.

There appears to be a mistaken idea with a good many about bees biting grapes. It seems to me that among men as sharp as the bee men are about most things, there need not be such a diversity of opinion. In the first place, I will say that I know as well as I know anything that they do not do it. Let us take a little close observation and see if we cannot prove how they are opened. All that I have seen were as follows: The skin is picked up near the top of the grape and torn down the grape, usually the hole growing wider as it descends, and the skin left hanging in a sort of tag about half an inch long. The skin is not bitten on the sides of the wound, but torn from the top where it was first taken hold of. Now what kind of a bee could take hold of a grape skin and tear it like that? If it had hold of the end with its teeth, it would have to stand on its two hind feet, and be able to tear both sides at once, which no honey bee living is half strong enough to do; and more than that, if a bee will not bite through a red clover blossom where there is plenty of nice honey to be obtained, she never would bite through a grape skin, which is three times as thick, to get at a thin, watery juice, that she will hardly suck at all until the sun and air have dried and sweetened it. Then she will work on it some and buzz around it a great deal, and a careless observer is ready to lay it to them, simply because they are there and he does not see anything else to lay it to.

My son lived near me and raised a good many grapes, and I kept bees. He kept complaining to me that my bees were destroying his grapes, it was too bad, etc. I had some grapes between my house and barn, which were torn in the same way, that I passed often, and I did not have to watch long to find out where the trouble was. I pointed it out to him, since which I do not hear any more about my bees destroying his grapes. The marauder was the oriole, fire hang-bird, red bird, or English robin, for it is known by all these names in different places, although the red bird is a darker red, and lives in the woods. I suppose grape growers will expect to see the bright peach-blow colored bird that is seen and heard in apple blossom time, tuning up his song of gladness as he hops among the flowers. The oriole, like the turkey and some other of the male birds, is nearly twice as large as the female. The female is a small, brown bird, with a tinge of yellow and some light spots on close examination, but at a little distance looks brown, and the young ones are all of the same color until they shed their down, which they do at the south in the winter. But when you see a small, brown bird, that might be easily mistaken for a sparrow, that seems to come from the top of a tree or the clouds, and flies right into the leaves of a vine—for they seldom light where they can be seen, but go very quietly, and when you drive it out, flies right into the leaves again to alight, and as he flies says, quink, quink, quink—that's it every time. They make another loud chattering noise when disturbed, but not as often. Look where it started from and you will find fresh work. What satisfaction it is for it to pick open so many grapes (it will do a hundred in a few minutes) when it does not eat three, I do not know; but I suppose it tastes the juice and looks for a sweeter one, and when it gets enough they don't taste so good, and it keeps looking for one that tastes better, as children do when they go into an orchard. It is just as bad on sweet corn, only that the husk makes so much hard work that it is glad to stop when it gets enough. I have had them tear open bushels of wild-goose plums when ripe, red and soft, and followed them around the orchard to get a shot at them; but they would always fly out from the opposite side of the tree and keep behind it till they reached another, so I could not shoot without putting the whole charge into the tree top. They seldom alight where they can be seen, and seldom remain still long. Adam laid the taking the forbidden fruit to Eve, so here it is the female and young ones who generally do the harm. The males seem to leave very early and go by themselves. Wild turkeys do the same, the old gobblers go in a flock by themselves, and the females and young ones in another, as soon as the mating season is over.

For the American Bee Journal.

Lower versus Upper Ventilation.

R. CORBETT.

"How shall I winter my bees to insure success?" is a question which no doubt occupies the minds of many apiarists at the present day, and even at this season of the year. I have read the many plans set forth in the BEE JOURNAL, and, from my observations, I do not wonder that many fail.

I have been handling bees for over 50 years, in the old box hive, until 1865, and I think I have gained much knowledge from my experience. My memory carries me back to the winter of 1831-32, when there was a snowfall early in January to the depth of nearly 3 feet. The wind changed to the northwest, and blew for over 6 weeks, never changing its course, the mercury ranging from 10° to 20° below zero, and one or two days at 28° below. That winter my bees stood on a bench two feet from the ground. The hives were raised from ½ to 1 inch, on blocks, open all around the bottom, and out of 17 colonies 16 came through strong and good, while the other starved for want of honey. The bees had not the least bit of ventilation at the top, not so much as to exude their own moisture, which proves that upward ventilation is not necessary. However, I think that bees do need something to absorb their own moisture, but no direct draft.

There are some points in the shape and size of the hives esential. In the case alluded to, I think the hives were 17 or 18 inches deep by 10 inches in the clear. In those primitive days we had no holes cut through the comb for bees to pass through for their food. The honey being above them, it was kept from freezing by their own heat, therefore it was always soft and moist, and ready for them to partake of when they were hungry.

I will refer you to a couple of instances I have read of. Dr. McClain, of Oskaloosa, Iowa, I think, concluded to test the problem of wintering, by putting some in a cellar, burying some, leaving some on the summer stands, and for one he drove 4 stakes in the ground, nailed cleats on the sides of the hive, and hung it by the cleats on top of the stakes, with the mouth 10 or 15 inches from the ground. This hung there for 5 successive winters, good and strong, and how much longer I have no information.

Another gentleman, a Mr. Jackson, for an experiment took one of his colonies and hung it 4 or 5 feet from the ground, against the side of his house, and there it remained 3 successive years. In both instances the mouth of the hive was open full size of the hive. As we do not have 3 or 5 winters in succession without a severe one, I think this goes far to prove that downward is what is needed, and not upward—all other conditions being right. Neither method will save them without provisions of the proper kind. I hardly ever lost any bees that had enough to live on. Once I lost all I had (9 colonies) well filled with bees and honey. I thought I would do things up in a nice manner, and closed the hives all up around the bottom with the exception of a small entrance. I then covered them around the outside to shelter them from the winds and storms, and just smothered them. (This was before I read the BEE JOURNAL.)

Now when I fix my bees for winter, I take the oil-cloth from the top of the frames and lay on my quilts, pressing them down tight at the sides, and using some weight to hold it well in place, then fill with some absorbent and put on a good cap or roof to keep all dry. This is sufficient for the top without any other ventilation. For the bottom I have a manipulating block 2x10 inches with ⅜ or ½ inch taken out of the bottom of the block for a passage-way. This can be removed when they get a little uneasy, as they sometimes will in the cellar.

From what experience I have had in wintering bees, and from observations for a long time, open bottom hives are the surest and safest for wintering our pets, whether in or out of cellar, and the plan I have thought of is to take 2-inch planks, 8 or 10 inches wide, set on edge by nailing cleats across the top to hold them firm the width of the hive, or we can take 3 and make a kind of trough, to secure them from the mice. This plan keeps the bees and combs free from all filth that accumulates on the bottom of tight hives, also from stench, which is very offensive, and, I believe, injurious to the bees. Let it be understood, if out-of-doors, they will need the same protection as any other plan. I do hope some of our progressive bee-keepers will try this plan the coming winter, and report conclusions the following spring.

Manhattan, Kan.

CONVENTION
NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

April 11—Eastern Michigan, at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.

15.—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec.

19, 20—Tuscarawas and Muskingum Valley, at Coshocton, O.
J. A. Bucklew, Sec., Clarks, O.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27,—Western Mich. at Grand Rapids.
W. M. S. Dodge, Sec., Coopersville, Mich.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May 2, 3 -Eastern N. Y. Union, at Cobleskill, N. Y.
C. Quackenbush, Sec., Barnesville, N. Y.

11—Champlain Valley, at Middlebury, Vt.
T. Brookins, Sec., East Shoreham, Vt.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

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☞ The Central Michigan Bee-Keepers' Association will meet April 20, at Lansing, in the Capitol building. Programme.—President's annual address, Rev. J. Ashworth; bee hives and fixtures, E. W. Wood; Cyprian bees, J. Harper; the coming bee, Prof. A. J. Cook; care of old combs, Stephen C. Perry.

Rev. J. Ashworth, *Pres.*

☞ A special meeting of the Western Michigan Bee-Keepers' Association, will be held in Supervisors' Hall, Grand Rapids, Mich., Wednesday and Thursday, April 26 and 27, 1882. Wm. M. S. Dodge, *Sec.*

☞ The spring meeting of the Northern Ohio Bee-Keepers' Association will be held at Norwalk, O., on Saturday, April, 15, 1882.

S. F. Newman, *Sec.*

Read before the Marion Co., Ind., Convention.

Spring Management of Bees.

MRS. C. ROBBINS.

The first thing to be done in the spring with bees, is to open the hive and examine each colony, ascertaining whether there are sufficient stores and a queen with which to begin spring work. I have come to the conclusion that we open our colonies too early. We know that every time we disturb them we excite them more or less, and, therefore, they consume more stores. We also know that the bees that have lived over the winter have only vitality enough to rear the bees that collect our stores in summer; therefore we should spare them their forces until the proper time, and not excite them to premature vitality. We know also that eggs laid very early in the season, if there should come a cold snap, are chilled and have to be carried out.

Every apiarist should know whether his bees have enough stores or not to last until natural pollen can be collected, also whether his hives and bees are dry or not. If enough food, then do not open the hive until the bees collect natural pollen. Then we know that the spring is open and that breeding begins in earnest, and that the labors of the bees and apiarist have begun for the season. Even yet, I would not advise removing any of the packing that may be around them. I doubt much the policy of contracting the brood chamber in the spring. Here is one hive, we leave the frames all in that have been in all winter; when the weather is too cold to fly, the bees will clean up the combs and carry the honey from the outside combs to the brood combs in the center, thus giving them employment and not exposing them to bad weather (when the bees are busy we are not troubled with robbers), and, above all, saving the apiarist so much work feeding and putting in extra combs every few days.

Beside this hive stands another. Very early in the spring, or, rather, in the latter part of winter, we open the hive, take out the outside combs that have quantities of stores in them, stir up the bees, looking for a queen that we should be pretty certain was there from thorough examination and ample preparation in the fall, put in feeders and warm syrup. By that day's work we have taken the initiatory step to spring dwindling and robbing. As we know that it only takes 6 weeks to build up a weak colony into a very strong one, if we begin the first of March, we will have our colonies ready by the middle of April, and our honey crop in this locality is not collected until the last of May and in June.

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☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. Demaree, *Sec.*

Christiansburg, Ky.

Bee-Keeping in Maine.

The following are extracts from the opening address of Mr. F. O. Addition, President of the Maine Bee-Keepers' Association, at Dexter, Me., on Feb. 9, 1882:

The year of 1881 has passed away with its failures and its successes, leaving us wiser by our experience, and better fitted for our several duties in the future. Those engaged in apiculture came through the demoralizing winter of 1880-81 in many cases with but poor courage to begin another season; and the present winter may be even more disastrous. But be not discouraged; try again, and if "luck" is what makes success in bee-keeping, it may be a good turn next.

We can hardly realize the progress of apiculture in this State for the last half century. Although we are as a State still far behind some of our sister states in the quantity of honey produced, we rank among the first as to its quality; and when we become more thoroughly awake to this branch of business, with the territory we have, capable of supporting large apiaries, where from year to year the flowers blossom and die without the hum of the busy bee (except now and then one from its leafy home), when we get this vast territory to yield to us its golden nectar, then we will have for our motto, as bee-keepers, the motto of our state: Dirigo: "I lead."

Now, a word about this Association: It is important that we sustain it, as it is what we have long needed in Maine. Other states have their bee associations, and among their numbers we find some of the most successful bee-keepers; and this one, if properly managed, will do us a great amount of good. Although our numbers are now small, yet we must persevere in extending bee-culture more and more, until the dream of the poet shall be realized:—

"Each household of an apiary possessed,
Bee-keeping followed with unflagging zest;
Honey and milk shall flow all countries through
And home, *sweet* home obtains a meaning new."

There is a certain amount of pleasure which one derives from the care of bees that is both healthful and enjoyable, and if we can only get a fair interest on our money invested, and a reasonable compensation for our time, we should be satisfied; and this any wide-awake apiarist, with the improvements which have been made in bee-culture, can do.

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☞ The semi-annual meeting of the Tuscarawas and Muskingum Valley Bee-Keepers' Convention, will be held in the Town Hall at Coshocton, O., on April 19 and 20, commencing at 10 a. m. A cordial invitation is extended to bee-keepers everywhere.

J. A. Bucklew, *Sec.*, Clarks, O.

☞ The Champlain Valley Bee-Keepers' Association will hold their semi-annual meeting at Middlebury, Vt., May 11, 1882. T. Brookins, *Sec.*

SELECTIONS FROM OUR LETTER BOX

Artificial Comb Honey.—Yesterday one of our grocers, with whom I had frequently disputed in regard to the possibility of making artificial comb honey, triumphantly shoved the inclosed paragraph in my face, with the usual "I told you so" clearly marked on every feature. The article was in the *Grocers' Criterion*, published in Chicago. I should like to have the reply come out in the Monthly BEE JOURNAL, so I will get to see it.

J. H. HASSLER.

De Pue, Ill., March 16, 1882.

[The article referred to was that published in the BEE JOURNAL of Jan. 25, page 51, and accredited to Prof. Newton. We have so often denied the probability and possibility of the imposition being practiced, that to do so again at length would be a waste of time and space.—ED.]

Prospects Cheering.—What bee men are in this part of Michigan all have the cheerful words to say, "My bees are coming through all right." I have heard of but 7 colonies being lost. We have had no zero weather this winter, with warm days every few weeks. Last spring I had 30 very light colonies left out of 101; now I expect to go through with my 70. I see the matter of bee feed is being talked up by many; well, I feel like falling in that line myself, as I intend putting in 10 acres this spring. Having sold our place here and bought again at Glendale, Mich. (my correspondents will please notice the change), a very good bee location. I intend making bee-keeping a specialty. Your Apiary Register I think is just the thing, but the large size which I have is rather bulky to carry in the pocket. By having a small memorandum, and then copying at your leisure, I cannot see but what it will be a great help in improving the quality of our bees. I wish every bee-keeper had one.

G. W. NAFTZGER.

South Haven, Mich., March 25, 1882.

The Secret of Success.—We see many ideas as regards bee-keeping. We find the great secret of success is in well wintering and the care exercised that they do not get too warm, or in too cold a place, so they cannot move. I find that the best temperature for wintering is at freezing, and good ventilation to take off the foul gas. The past winter bees did well in most any place. There are more bees lost from starvation than most any other way. They may starve with 30 or 40 lbs. of honey in the hive, *i. e.*, the thermometer may stand from 20° to 30° below zero for 30 to 50 days. The bees are clustered all that time without any food to keep up heat, and thus perish. I am satisfied that I have lost bees in this way. When bees are smothered you will find them all through the hive; when they freeze they are in a compact body; when they starve, the cluster is loose, with now and then one getting to the cells for supplies. Bees should have as careful attention as stock on the farm. Bee-culture is like any other business—more lose money at it than make money. Bees are in a booming condition here. THOMAS PRALL.

Carlisle, Iowa.

A Voice from Egypt.—I see in the BEE JOURNAL a good many communications from Illinois, but none from this part. I wish people would give the county, then when I look on the map I could locate them; they seem so like neighbors. There is not much interest taken in bee-keeping here. They claim they have no "luck" any more—"the moth eats them up." "The gude mon" saw a neighbor this morning we had heard was a great bee man; found his bees in all sorts of boxes, but he was quite elated at the prospect before him. He had just heard of some kind of hive that had frames a person could lift out and look at, also just heard of extractors—was bound to have both, for he had been informed he could take 8 lbs. a day from each colony. This man is a preacher, and if preachers wake up who knows what will be the result? Well we cannot brag much. I like James Heddon, he says *we*, and believes in women's rights. I think all the James do. When we came on our farm, two years ago, we did not know a drone from a worker, and never saw a queen, and the first two colonies we bought, one was dead with about a teacup full of dead bees. Instead of 8 lbs. a day, we had 15 colonies to feed last summer from the 20th of July to the last of August, when, thanks to a kind Providence, the rain came, and and bees filled their hives and gave us about 100 lbs. of surplus. But I thought we had an elephant on our hands, and did not know but we would have to feed all winter. After tinkering one year, we concluded we must have a bee paper. We supposed there must be one somewhere. Accidentally we saw a list of bee literature in some paper, and found the country was flooded. We decided on the *Bee-Keepers' Magazine*, but found a once-a-month bee paper too much like the "onct a month" preaching down here in some places—a slow starvation. The BEE JOURNAL fills the bill. To make any business a success, we must understand the whys and wherefores. It seems bee-keeping has more whys and wherefores than any other business. Now I want to ask two or three simple questions—very simple to those who know. 1. Why should frames be hung from front to rear? We have them both ways; they were hung that way when we bought the hives, and we want the best way. 2. When is the best time to divide bees—before the white clover or after, to get the most honey? 3. We found a plant on our farm that I have been unable to find a name for. Our attention was attracted to it the 1st of September, by the great number of bees on it. We found only five plants, although we looked far and near; about 5 feet high, branching like mustard, a small pink and white blossom similar to radish bloom; applying the tongue, found the blossom very sweet. I do not know how long it had been in bloom. I found bloom in November, and marked the stalks, but they are all dead, root and branch. I sent seed to Mr. Stewart, Eminence, Ky., who said it was a stranger to him; also to call it Allison's honey plant. I do not like to blow a horn, so I will call it the silver nectarine plant. I inclose a few seeds, as you may be able to throw some light on the plant.

Noble, Ill. MRS. C. J. ALLISON.

[1. The frames are run from front to rear because the bees build straighter combs in that manner; also, because the natural instinct of the bees prompts them to run their combs from the entrance.

2. After white clover, unless fruit bloom is very abundant and the weather pleasant.

3. The seeds are too few and dried to determine the name. Be kind enough to send a twig in bloom this fall, when we will name it, if possible. —ED.]

Honey from Maple Blossoms.—On Feb. 18th my wife was looking at the bees working, when she came in and said, "How the bees fall at the mouth of the hive; they seem to be loaded with honey and pollen." She seemed somewhat excited about the bees working so lively. I went out and saw that they were heavily loaded both with honey and pollen. The maple trees were plenty, standing all around the hives, and a good many of them were in bloom. I saw the bees take the honey from the blossoms, or, at least, go through the motions. There was nothing in bloom at that time but the maples. I have watched the bees work on corn, but never thought they gathered honey from the tassels; I know they gather pollen from them.

ED. DELAIR.

Oketo, Kan., March 26, 1882.

Brood-Rearing in Wired Cells.—I was told yesterday that there would be no brood reared in cells over the wires in foundation, after it has been used 2 years, except in an occasional cell. Is such the case? I used wired foundation (wire No. 36, tinned) last season, and saw no difference in cells with or without wire. I believe if brood is not reared over the wires after two seasons, I will still use the wired foundation; it is so much stronger and less liable to sag.

A. B. MASON.

Wagon Works, O., March 24, 1882.

[Can some of our correspondents, who have been using wired foundation, give the information desired?—ED.]

More About Mrs. Cotton's Transactions.—I have been waiting patiently since the publication of my letter of Dec. 9, in the BEE JOURNAL, page 40, of this year, in which I offered $5 for proof that any person had ever sent Mrs. Cotton money for goods and had neither received the goods nor the return of the money—for some person to step forward and claim the money. As yet not a person has intimated to me directly or indirectly that they have any claim on my money, nor did I suppose there would, for I have made a very careful investigation of Mrs. Cotton's affairs and way of doing business, and had become thoroughly satisfied that she was trying to do an honest and legitimate business. The only "peep" I have heard from any one is the query on page 91 of the BEE JOURNAL, by J. W. Merrifield, if I regard a certain transaction described by Mr. Fletcher "as straight." The transaction with Mr. Fletcher is not published, but one with his mother (apparently the same) is published. Mrs. Cotton advertised a "sample" hive for $4, and, through ignorance, sent a "model" hive instead of a "sample" one. In my investigations, I came across transactions of this kind, but also ascertained that as soon as the difference between "sample" and "model" was pointed out to Mrs. Cotton, she furnished a full-sized hive, and has sent no more "models," nor advertised any more "samples" since. If one will examine the dictionaries for the difference of meaning between the words "sample" and "model," they will find that it is more in the common use of the words than in the actual meaning. Now as to her "model" I make this statement: If a box-hive man should pay for a model, and by it be led to use any movable frame hive, he would be amply repaid, even if he had to pay 95 cents express charges. The transaction was not intended as a swindle, and I think was not.

R. E. HOLMES.

West Winsted, Conn., March 27.

[We have not the slightest desire to hinder any one from doing an honest business, but until Mrs. Cotton adjusts the many complaints against her method of doing business, she certainly has no claim to be reckoned among honorable dealers. She has recently published a vindication in the *Farm and Workshop*, in which she says:

"I have learned that many of the bee journals and bee-keepers' associations are conducted wholly in the interests of some individual or company of men for the sole purpose of making money for the sale of some particular, and often worthless, bee hive or fixture, without regard to its real merit or value to the practical bee-keeper. The country is full of this class, and they always combine to crush out real merit in anything pertaining to bee-culture brought before the public by individual bee-keepers. The greater the merit of the invention, the greater the effort to crush it."

This is a bare-faced falsehood; she has been doing business in such a manner that her customers complain, and the bee papers, much against their inclination, have given place to the facts as stated by their correspondents, simply in the interests of honest dealing, and to protect the innocent from being imposed upon. When she has satisfied her complainants will be quite time enough to attack the bee periodicals, until then, she must expect adverse criticisms.—ED.]

Queens Behind Division Boards.—By answering the following questions you will very greatly oblige: 1. Are queens often found to lay behind the division board? While preparing 7 colonies in American frames last fall, I placed a comb behind the division board in each hive, with the hope that the bees would carry the honey forward. They were not crowded for room in front. On examination, two days later, I found all the vacant cells had been used in these combs by the queens—an egg in each. This happened in 5 out of the 7 colonies. It was the end of November. The queens are hybrids. All the combs in the body of the hives contained brood. I put this forward also. Examined the bees early this month and found many very young ones among them. They were all packed in a straw clamp in a sheltered position. 2. Are the queens likely prolific? 3. What amount of honey can be put into 1 lb. of comb? 4. How do the Arkansas brown bees compare with the blacks in essential qualities; and the albinos with the Italians? 5. I find there are 2 sizes of Langstroth frames used—the one about ½ inch shorter than the other. The former will just contain 8 4¼x4¼ section boxes. Can you tell me which size is the more used? Spring seems rather behind this year, nothing budded yet and the weather cold; but to-day we are having warm showers. Bees have wintered well so far.

G. B. JONES.

Berlin, Ont., March 27, 1882.

[1. Very seldom, and then only when the passage-ways are large and the brood chamber crowded.

2. Yes; they had been packed away quite warmly, and the winter being unusually open toward the latter part, young bees had an opportunity to arrive at maturity.

3. We do not know.

4. They are said to be larger, are straighter and more rapid comb-builders, remarkably docile in disposition, and of strong flight. They do not run down and drop from the combs as do the blacks, unless persistently smoked. We cannot answer your interrogatory regarding albinos, as our knowledge regarding them has been derived from our columns. We suppose, however, inasmuch as they are Italians, their habits in many respects are similar. Probably their points of superiority, if any, have been developed by a careful and judicious breeding.

5. The standard Langstroth frame is 9⅛x17⅝ inches, outside measure; the top-bar being 19⅛ from end to end. This holds 8 4¼x4¼ sections. This size is mostly used.—ED.]

How I Use the Bee Journal.—The binder for the BEE JOURNAL is just the right thing. I have all the numbers, so far, for 1882, put in tight and nice. It is so handy, when one writer refers to another, to turn back and see what he has said. In this way we get the ideas of different ones on the same subjects. Bees have wintered well and are strong; drones were flying from my large palace hive on March 20. I predict a large flow of honey this season.

AARON BENEDICT.

Bennington, O., March 23, 1882.

My Misfortunes.—Two years ago I bought 5 untested or dollar queens from a noted queen breeder, whose name I will withhold at present; 4 out of the 5 produced hybrid workers. Last spring I purchased a $3 tested queen from another big bee man in good standing. She laid eggs 4 weeks and died of old age. For fear some one will ask how you know she died of old age, I will state, first, I claim a judge of bees can tell an old bee or queen at a glimpse; second, an old queen does not keep her hive well stocked with bees. This is the best proof of an old queen I can give. In July I purchased another tested queen of the same man; she kept her hive fairly stocked until October, when she failed. On examining this spring, I find she is worthless. The worker larvæ is very scarce, and there is about half a frame of drone larvæ in the hive, while all my other colonies have from 4 to 6 frames of brood. Now, I would like for some one to tell us what we are to do to avoid being swindled. When one wishes to Italianize his apiary it will not do to buy untested or dollar queens. My experience in the five above mentioned, 4 were worthless, making the good one cost me $5, and the majority of the tested ones are so old they are ready to die when we get them. Fortunately, I have a good strain, and can rear my own queens hereafter.

Poseyville, Ind. J. F. KIGHT.

[It is easy to understand how your first tested queen might have been old, as, having been purchased quite early in the season, the party from whom she was purchased had wintered her over and forgotten her age, and, not having time or neglecting to test her anew, took it for granted she was all right. With an "Apiary Register" properly kept, it would be impossible for these mistakes to occur. We can hardly imagine how to account for the failure of the queen sent you in July, if she had been bred and tested by the person from whom you obtained her.—Ed.]

Combs Destroyed by Moths.—Bees are bringing in pollen and some honey, although they are sitting on fences, trestles and anything convenient, on account of the floods which have swept through here. My bees brought in pollen in December, and they have not quit brood-rearing during the winter. I have failed to keep my extra combs over winter on account of moths. Will some one give me their plan of preserving them? I hung mine in a tight room, and burnt sulphur at the rate of one pound in two weeks, and yet they ruined them.
W. G. McLindon.
Lake Village, Ark., March 28, 1882.

[You did not use sulphur enough. They should be fumigated with it several times, at intervals of about 10 days, and using at least a pound of the sulphur at each operation. If you have interchangeable second stories, a good plan would be to fill a hive with combs, then set on a second story with no bottom, fill that with combs, then put on a third, and so on till all the combs are hung in bottomless hives over each other; now put on an empty second story, place in this an iron pot with some live coals in it, then plenty of sulphur, and cover the hive; open the entrance of the lower hive to afford a draft. Sulphur fumes being heavier than air, they will slowly descend, and destroy all insect life. The operation will need to be repeated about three times, to kill the larvæ which may hatch after the first and second operations. The trouble with fumigating with sulphur ordinarily is that, unless the room is very close, the combs get very little smoke, as they are usually hung up, and the fumes do not ascend, but escape from the lower sides of the building.—Ed.]

Honey from Corn.—I can tell Mr. Mahin that bees do gather honey from corn tassels, and if he will call at my house he can have some very nice corn honey to eat, which my bees gathered late last fall from a patch of fodder-corn that I sowed just before harvest. The weather set in dry, and it made very little growth till in September, when the rain came and the corn started growing. It soon tasseled out and blossomed profusely, and as there was no frost till late in the fall, my bees had a rich harvest. The way they filled up their section boxes was a joy to behold; they worked on that corn as long as there was a green tassel left. Probably that correspondent in *Gleanings*, referred to by Mr. Mahin, is a closer observer than he (Mr. Mahin) is aware of; but that bees gather honey from corn tassels is no new feature to me. What say other bee-keepers? Now, I want to ask a question—do bees ever refuse to work on melilot clover? I had a patch last summer, the seed of which I obtained from Chicago, but the bees paid no attention to it. I inclose a sample of the seed, is it genuine.
West Liberty, O. L. Z. Lantz.

[The seed you send is genuine. We never but once before heard of bees refusing to work on sweet clover, and in that instance there were but few stalks of it within reach. There is, however, a variety of sweet clover which produces yellow blossoms, on which we do not believe the bees will work to any extent; but the white blossomed (*melilotus alba*) will, if growing to any extent, always be covered with bees.—Ed.)

Feeding Maple Sugar.—I am wintering my bees in a cellar, and am feeding some of them with maple sugar, by laying it on the frames. Is it good feed for them? C. M. Slack.
Eldred, Pa.

[A mild winter, such as this has been, it may do; but we would be fearful of the consequences, unless they were out-of-doors and could fly frequently.—Ed.]

Color, Pleasure and Profit.—I apprehend the color most eagerly sought after, by the majority of apiarists, is the color of the pocket, and those which give the most universal satisfaction are the greenback color or gold metal hue. It matters not to the great mass of bee-keepers whether the contents of the hive are gathered by brown, black, yellow, or leather-colored bees, provided these products swell the aggregate amount of profits each year, and return to their owner satisfactory remuneration for the labor bestowed upon them. The profits are what 99 out of 100 keep bees for. Talk of keeping bees for pleasure, without profit, if you can show me such an apiarist, I must candidly confess that I have seen a curiosity of the genus *homo*. If bending over hives, examining nuclei, extracting honey, cutting out and inserting queen cells, rendering beeswax, caging and shipping queens, and writing a score of letters daily is a pleasure to while away the leisure moments from other pursuits, I must cheerfully confess that I will be somewhat careful about calling for pleasure too often when traveling. What the mass of bee-keepers want is plain, practical knowledge in the mode of keeping bees. What cares the average bee-keeper for the fine hair-splitting points regarding the color of the bee; they would rather have one inch of Mr. Doolittle's plain, practical experience conveyed to paper in his instructive manner, than reams of fine points and theoretical reasonings. I think all of even a limited experience, are ready to admit that, by judicious selection from colonies possessing the most desirable qualities, we can breed our bees up to a high standard of profit.
Fredonia, N. Y. U. E. Dodge.

Bokhara or Sweet Clover.—I would like to know if Bokhara clover and sweet clover are one and the same thing? 2. How much is sown to the acre. 3. What is the cost per lb.? My bees are in the cellar and doing well. Have not lost any yet, nor do I expect to. I am beginning; but will report my progress next fall, all being well. A. Subscriber.
Columbus, Ont.

[1. We believe Bokhara or sweet clover (*melilotus alba*) to be the same; at least we fail to observe any difference, and we have frequently seen them growing together. The bloom, too, is apparently the same.

2. Five or six pounds. If in drills, a little less.

3. The retail price in Chicago has been 30 and 50 cents per lb. The former for domestic, and the latter for imported seed.—Ed.]

Grease in Foundation.—In manufacturing foundation comb, is grease of any kind extensively used? and if so, is it sometimes, or very frequently, of a filthy nature, or that taken from diseased animals? Quite recently I saw it asserted in a very influential paper, that such is the case. If it savors of the oleomargarine fraud, I want to know it, for above everything else, let my "sweetness" be pure. As your valuable Journal occupies the front rank in publications of the kind, will you kindly give your views, and the facts as far as you are able, to the public, through its columns, as there are doubtless a great many others, like myself, who would be glad to hear from you on the matter. Bees are doing well, and, as a general thing, no thanks to their keepers, for there is very little intelligent care given them in this country.
Salado, Tex. W. P. Hancock.

[It is not true that grease is used in the manufacture of foundation. It is possible that some inexperienced persons may have tried greasing the rolls, to release the sheets from them, but even such would soon be obliged to abandon the practice, as their bees would utterly refuse to work it out, and customers would be apt to return it to the manufacturer because of its worthlessness. The freshest, purest and brightest wax in the foundation, makes it most acceptable to the bees, and, consequently, most profitable to the bee-keeper. Even soap-suds, with which to wash the rolls, is very objectionable.—Ed.]

Oldest Bee Paper in America
THE AMERICAN BEE JOURNAL
Established in 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance.
Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance:

For **4** weeks		**10**	per cent. discount.
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" **13** "	(3 months)	**30**	" "
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Discount, for **1** year, in the MONTHLY alone, **25** per cent., **6** months, **10** per cent., **3** months, **5** per cent.

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Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

THOMAS G. NEWMAN,
974 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

"How do You Manage," said a lady to her friend, "to appear so happy all the time?" "I always have Parker's Ginger Tonic handy," was the reply, "and thus keep myself and family in good health. When I am well I always feel good natured." See other column. 11w5t

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

☞ To any one sending two *new* Weekly subscribers for a year, we will present a volume of the BEE JOURNAL for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our *new* subscribers will be pleased to learn that they can get it for $1.00, by sending for it *at once*, before they are all gone.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞ The Texas State Bee-Keepers' Convention will hold its meeting at Judge W. H. Andrews' Apiary, at McKinney, Texas, April 25, 1882.
WM. R. HOWARD, *Sec.*

◆

For man it has no equal; for beasts it is not excelled. What? Kendall's Spavin Cure. 14w4t

◆

To Promote a Vigorous Growth of the hair, use Parker's Hair Balsam. It restores the youthful color to gray hair, removes dandruff, and cures itching of the scalp. 11w5t

CLUBBING LIST FOR 1882.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A. I. Root)	3 00..	2 75
Bee-Keepers' Magazine (A. J. King).	3 00..	2 60
Bee-Keepers' Instructor (W. Thomas)	2 50..	2 35
The 4 above-named papers	4 50..	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A. G. Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 7 above-named papers	6 30..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman)	2 40..	2 25
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

◆

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 3, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 8c. for dark and 10c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 22c. for good yellow wax, on arrival; 18@20c. for medium grade, and 15@17c. for dark.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

HONEY—The demand for comb honey is slow, and prices nominal at 16@20c. on arrival. Extracted honey is in fair demand. Our jobbing prices for 1 lb. jars of clover honey are, per gross, $25; for 2 lb. do., per gross, $42. The demand for manufacturing purposes is very good. We pay 8@10c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb honey is very scarce and commands 22@25c. per pound. Other grades, partly dark and dark are very slow sale. Extracted firm at 9@12c., according to quality and style of package.

R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—There is a liberal supply of honey here for which trade is very little demand, and prices rule weak and irregular.

We quote as follows: White comb, in small boxes, 18@19c; dark, in small boxes, 12@14c. Extracted, white, 10@11c.; dark, 7@9c.

BEESWAX.—Prime quality, 21@23c.

THORN & CO., 11 and 13 Devoe avenue.

SAN FRANCISCO.

HONEY—The bright prospects for a large yield this season is causing spot lots to be offered at reductions on late asking rates. White comb and white extracted are virtually out of market, and prices for them nominal.

We quote white comb, 16@20c.; dark to good, 10@14c. Extracted, choice to extra white, 8@10c.; dark and candied, 7c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—Strained dull, at 8@9c.; no comb here to speak of—worth 18@22c.

BEESWAX—Stiff at 20@21c. for prime.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—The market remains unchanged: 1 and 2 lb. sections of No. 1 white are in regular and quick demand at 21@22c. No. 2 white has dragged a little of late, but took a lively start to-day at 20c. cleaning out all stock on hand. Buckwheat no sale. Extracted is quite active at 12c. for small and 11c. for large packages.

BEESWAX—25@30c.

A. C. KENDEL, 115 Ontario Street.

Advertisements.

The American Bee Journal is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

BINGHAM'S CORNER.

Columbus, Ind., March 23, 1882.

GENTS: Your smoker circular came to hand this morning. I notice the price for your largest (2½ inch) is $1.75 by mail; but in your advertisement in the Bee Journal you mention the prices from 65 cents to $2.00 each. Now, as I want one of your Largest and Latest Improved Smokers, I send you the $2.00. Please send by mail, and oblige

Yours, respectfully, JOS. M. BROOKS.

P. S.—I have been using one of your first make for five years I think, and although it has received constant rough treatment, it is yet good for duty, and as my brother will use it this season, I now order another for my own use. J. M. B.

Sweet Clover Seed Wanted.

I wish to purchase several bushels of Sweet Clover (*Melilotus alba*) Seed. Address, stating quantity and price, **A. H. NEWMAN,**
12wtf 972 W. Madison Street, Chicago, Ill.

FOR SALE—150 Colonies of Italian Bees in improved Quinby hives, in prime condition.
39w1y L. C. AXTELL, Roseville, Warren Co., Ill.

HONEY PLANTS AND TREES

BY MAIL, POSTPAID.

Ten Basswood Seedlings, 25c.; 10 Catalpa speciosa, good as basswood for honey, wood never decays, 25c.; 12 Turner Raspberry, stand Dakota winters, splendid for fruit and honey, 25c. Special rates by the 100 or 1,000. **H. M. MORRIS,**
10w5t Nurseryman, Rantoul, Ill.

1882-J. S. TADLOCK.-1882

LULING, CALDWELL CO., TEXAS.

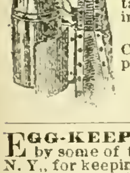
Breeder of Pure Italian Queens. I use one of J. H. Nellis' best imoorted queens. Tested Queen, $2.50; per half-dozen, $13.50. Select Tested, $3; per half-dozen, $16. No "Dollar" or nuclei-queens handled. Safe arrival and satisfaction guaranteed, if possible. 14w39t

BEES and HONEY

FOR SALE.

JNO. P. HOLLOWAY, Monclova, Ohio.
14w1tp

WANTED—A good, temperate, industrious man that has had some experience in the business, to work in an apiary. Give age, experience, and wages wanted. Address.
W. D. WRIGHT, Knowersville, Albany Co., N. Y.
14w1tp



BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including the CONQUEROR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

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EGG-KEEPING COMPOSITION—Used by some of the largest egg dealers in Western N. Y., for keeping spring and summer eggs for fall and winter market. A good business, when suitably located, to follow with bee-keeping. Write for terms and particulars. **C. R. ISHAM,**
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Full Colonies, Nuclei, Tested and Untested Italian Queens, bees by the pound. I guarantee safe arrival. Address, **OTTO KLEINOW,**
13wtf Opposite Fort Wayne, Detroit, Mich.

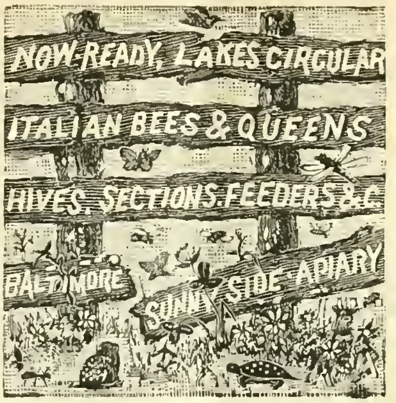
THE RURAL CANADIAN,

A Fortnightly Journal of

Agriculture, Horticulture and Rural Affairs.

Edited by W. F. CLARKE, and

Published at 5 Jordan street, Toronto, Ontario, Canada, at $1.00 a year, by C. Blackett Robinson, Liberal inducements to local agents. 44mtf



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Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.
11wtf E. A. THOMAS & CO., Coleraine, Mass.

Bees and Queens a Specialty.

I have a choice lot of Tested Italian Queens, also Full Colonies of Bees, I offer for sale cheap. I shall breed and have for sale after June 1st, young Queens from the best of Imported stock. Satisfaction guaranteed. Price list free.
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The Excelsior Cold-Blast Smoker sent to any address, postpaid, on receipt of $1.00.
14w2tp W. C. R. KEMP, Orleans, Orange Co., Ind.

65 *ENGRAVINGS.*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
974 West Madison Street, CHICAGO, ILL.

CHEAP.--CHEAP.

We offer for sale 180 good Colonies of pure Italian and Cyprian Bees, mostly in Langstroth and American Hives, at $4 each; 100 new, painted, Langstroth and American Hives at $1.50 each; 3,500 Boss Sections, $2 per 500; about 30 Queens, tested, $1 each; 300 lbs. Comb Foundation, 30c. per lb; two new Extractors, Muth's and Everett's, $4 each; one 12-inch roll Foundation Machine, $15. We will pay shipping charges on orders of $5 and upwards. Satisfaction given or money refunded.
11w6t **A. T. SEDGEWICK,** Corning, Ohio.

Florida Land--640 Acres

☞ CHEAP FOR CASH. ☜

DESCRIPTION.—Sec. 4, township 7, south range 7 west, Franklin county, Florida, situated about 50 miles south of the Georgia line, 25 miles west of the city of Tallahasse, the capital of the State, and about 25 miles northeast of the city of Apalachicola, a seaport on the Gulf of Mexico, and within 2 sections (5 and 6) of the Apalachicola river; the soil is a rich, sandy loam, covered with timber.

It was conveyed on Dec. 31st, 1875, by Col. Alexander McDonald, who owned 6 sections, including the above, to J. M. Murphy, for $3,200, and on Sept. 5th, 1877, by him conveyed to the undersigned for $3,000. The title is perfect, and it is unincumbered, as shown by an abstract from the Records of the county, duly attested by the County Clerk; the taxes are all paid and the receipts are in my possession.

I will sell the above at a bargain for cash, or trade for a small farm, or other desirable property. An offer for it is respectfully solicited. Address,

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SEED
CATALOGUE.

Thirty-six Varieties of Cabbage; 26 of Corn, 28 of Cucumber, 41 of Melon, 33 of Peas, 28 of Beans, 17 of Squash, 23 of Beet and 40 of Tomato, with other varieties in proportion; a large portion of which were grown on my five seed farms, will be found in my **Vegetable and Flower Seed Catalogue for 1882,** sent FREE to all who apply. Customers of last season need not write for it. All seed sold from my establishment warranted to be both fresh and true to name, so far, that should it prove otherwise, I will refill the order gratis. The **original introducer of Early Ohio and Burbank Potatoes, Marblehead Early Corn,** the **Hubbard Squash, Marblehead Cabbage, Phinney's Melon,** and a score of other new Vegetables. I invite the patronage of the public. New Vegetables a specialty.

James J. H. Gregory, Marblehead, Mass.
49a5t

NARMORE & WOOD,

NORTH LANSING, MICH.,

Manufacturers of

Bee Hives, All-in-one-piece Section Boxes,

FANNING MILLS, SASH, DOORS & BLINDS.

13w13t Italian Bees for sale.

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust an break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
13wtf Abronia, Mich.

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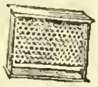
COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

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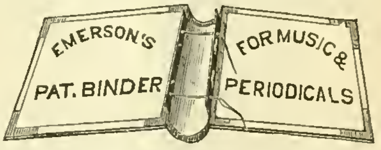

The Emerson Binder

IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Bee Journal of 1880	**50c.**
For Bee Journal of 1881	**85c.**
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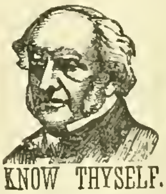
Address, **THOMAS G. NEWMAN,**
974 West Madison Street, **Chicago, Ill.**



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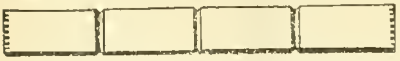
GOLD MEDAL Awarded the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self-Preservation;" bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only $1.25 sent by mail; illustrated sample, 6c; send now. Address Peabody Medical Institute or Dr. W. H. PARKER, No. 4 Bulfinch st. Boston. 22w1y

DUNHAM COMB FOUNDATION—35c. per pound; extra thin and bright, 10 sq. ft. to the lb., 45c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13w1y

Langstroth Hives & Sections.



Lewis' Improved One-Piece Section.

Price $4.50 per 1,000, any size to 6x6.

No. 1—First quality, dovetailed, any size to 6x6, $4.50 per 1,000.

No. 2—Second quality, dovetailed, any size to 6x6, $3.50 per 1,000.

No. 2 is planed smooth one side, same as No. 1, but lumber is not as clean and white.

LEWIS' ONE-PIECE BOXES, of white Basswood, all sizes, VERY LOW. No charge for boxing or crating sections.

Send for new Price List.

C. B. LEWIS,
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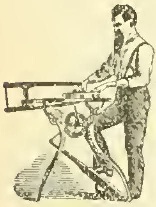
BARNES' PATENT
Foot Power Machinery



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SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

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See! See! See!
The Bee-Keepers' Exchange.

This journal begins its fourth year in a new dress, has been increased in size to 32 pages, is a live, progressive monthly, edited by practical bee-keepers, and is richly worth the subscription price, which is $1.00 per annum, postpaid, or three months on trial for 25 cents. Sample copy free. Our price list of Apiarian Supplies is now ready, and you will consult your best interests by securing a copy before you order. Address,

HOUCK & PEET,
1mtf **Canajoharie, N. Y.**

READ THIS.
FIFTY YEARS AN APIARIST.

We are the oldest breeders of Italian bees and manufacturers of apiarian supplies in New England. Our experience dates back to the first experiments of Mr. Langstroth in the movable comb system. Send for our price list of bees, queens and supplies, before making your purchases for 1882. Address, **WM. W. CARY & SON.**
1mtf Coleraine, Franklin Co., Mass.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture**, with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes**, all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to A. I. ROOT, Medina, O.

1882.--QUEENS--1882.

I am now booking orders.

Warranted Italian Queens $1.00, six for $5.00; Tested do., after June, $1.50. Cyprians, Unwarranted, $1.00, six for $5.00. Send for circular giving description and recommendation from Postmaster and county officers. Money order office, Versailles, Ky.

J. T. WILSON,
1mtf Mortonsville, Woodford Co., Ky.

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. *Sells at Sight*, Double your money Address Dr. Chase's Printing House, Ann Arbor, Mich
36m1yp

MISSISSIPPI APIARY.—I will ship Nuclei and Queens, and guarantee safe arrival and warrant all shipments to come up to my statements or refund the money. For terms apply to
OSCAR F. BLEDSOE, Grenada, Miss.
9m2t

Albino and Italian Queens,
BEES, AND
Supplies for 1882.

HEADQUARTERS for the ALBINO BEE.

If you have any taste for beauty, desire pleasure in working, and want large yields of honey, buy the Albino, for they are the "Coming Bee.' In order to meet the demand for Queens, I have increased my stock, and will be able to furnish several hundred per month after the 1st of May. Also, furnish Hives, Novice Extractors, and Apiary Supplies generally. Send for Price List. Address,

S. VALENTINE,
9m3t **Double Pipe Creek, Carroll Co., Md.**

1882. JOSEPH D. ENAS, 1882.

(Sunny Side Apiary,)

Pure Italian Queens,

BEES, COLONIES,

Nuclei, Comb Foundation, etc.,

Address, **Napa, Napa County, Cal.**
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For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
5mtf **PAUL L. VIALLON,** Bayou Goula, La.

C. Olm's Comb Foundation Machine.

☞ Send for Sample and Circular.
18mtf **C. OLM,** Fond du Lac, Wis.

M. H. BIRD & J. LEE,

Milletts, Eaton Co., Mich.,
Have for sale

Pure Italian Bees,

at reasonable prices, COLONIES, QUEENS, NUCLEI. We solicit correspondence, and guarantee satisfaction in every sale. **BIRD & LEE.**
9m3t

BEES, QUEENS & SUPPLIES.

Colony Italian Bees, in 10 (L.) frame hives, $6.00; 3 (L.) frame Nucleus, $2.00; 2 frame, $1.50—add price of Queens; Hybrid Queens, $1.00; Italian (Untested) Queens, laying (and where Cyprian and Holy Land Bees are kept) $1.00. All cells reared in full colonies. Bees, $1.00 per pound. Discount on larger orders. Guarantee safe delivery to your post or express office. Root's Extractors, Root's A B C Book and Cook's Manual, in cloth, each $1.25. Address,

OTTO KLEINOW,
9mtf Opposite Fort Wayne, Detroit, Mich.

HEADQUARTERS FOR THE

Golden Italians & Original Albinos,

BEES AND QUEENS.

Send for Circular. **J. M. C. TAYLOR,**
10smtf Lewistown, Frederick Co., Md.

Vick's Illustrated Monthly Magazine.

Each Number contains 32 pages of reading, many fine Wood Cut Illustrations, and one *Colored Plate*. A beautiful Garden Magazine printed on elegant paper, and full of information. In English and German. Price, $1.25 a year. Five copies, $5.00.

Vick's Flower and Vegetable Garden, 50 cents in paper covers; in elegant cloth covers, $1.00.

Vick's Catalogue—300 illustrations, only 2 cts.

Address, JAMES VICK, Rochester, N. Y.

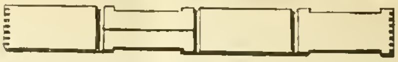
MY 16-PAGE PRICE LIST of Italian, Cyprian and Holy Land Bees, Queens, Nucleus Colonies and Apiarian Supplies, will be sent to all who will send me their name and address on a postal card.

H. H. BROWN,
14smtf Light Street, Col. Co., Pa.

ITALIAN BEES.—Having wintered without the loss of a colony, I will sell a few select colonies in the spring, and Queens during the season. Address,

R. M. ARGO,
9sm3t Paint Lick, Garrard County, Ky.

HIVES AND SECTIONS.



We are in better shape than ever to furnish Bee Hives and Sections, having remodeled our machinery, and put everything in tip-top order for the coming season. We make a specialty of our

"BOSS" ONE-PIECE SECTION.

We have not sold any rights to manufacture, therefore we are the sole manufacturers in the United States. Send for Price List.

JAS. FORNCROOK & CO.
Watertown, Wis., Dec., 1881.

NOTICE—Some persons having infringed upon our Patent "One-Piece Section," we hereby give notice, that we shall prosecute all manufacturers. We shall not molest bee-keepers for USING those purchased before Dec. 1st, 1881, but hereby caution them against buying any except those bearing our stamp. It has been reported by some that it is our intention only to prosecute bee-keepers for using those One-Piece Sections heretofore purchased; this is wholly untrue and false.

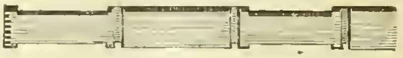
JAS. FORNCROOK & CO.
Watertown, Wis., Dec. 15, 1881. 51mtf

CHAMPION BEE-HIVE MANUFACTORY.

One of the largest manufactories of Apiarian Supplies in the world.

BEE-KEEPERS,

I have made a reduction from 5 to 15 per cent. on all Hives, Section Boxes and Comb Foundation.



The above cut represents my all-in-one-piece section, which is made in thickness according to size. Try one box of these sections, and you will never use any other. Printed directions in every box, showing how to fold them. Last year I could not fill all of my orders for sections, but I have a large stock of them on hand at present. Give me a trial. Send for FREE price list

CHAMPION BEE-HIVE M'F'Y,
Newcomerstown, Tuscarawawas Co., O.
R. L. SHOEMAKER, Proprietor. 10mtf

BE SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian, Cyprian and Holy Land Queens and Bees.

J. C. & H. P. SAYLES,
4sm15t Hartford, Wis.

1882-Southern Headquarters.-1882

For Early Italian and Cyprian Queens;

Imported and Home-bred; Nuclei and Full Colonies. For quality and purity, my stock of bees cannot be excelled. I make a specialty of manufacturing the Dunham Foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Catalogue, giving directions for introducing queens, and remarks on the New Races of Bees. Address,

DR. J. P. H. BROWN,
5smtf Augusta, Ga.

ONE-PIECE SECTIONS a specialty. Pound size, $4.50 per 1,000. L. Hives 50c. Circular free, BYRON WALKER & CO., Capac, Mich.
8sm12t p

D. A. PIKE, Box 19, Smithsburg, Wash. Co., Md., breeder of those **Beautiful Albino and Italian Queens and Bees**, which gave universal satisfaction last season. Send for circular, 8sm6t

ANOTHER NEW IDEA.

Foundation all ready for business. Every sheet wired and bound around with a light wooden rim, ready to adjust instantly in your frame. No advance in price. Small sample for 6 cents. I shall also breed choice Italian and Holy Land Queens, practicing a new stimulative process. Write now for prices and particulars. Address,
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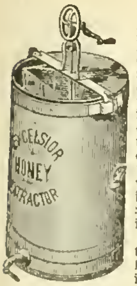
ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
974 West Madison Street, **Chicago, Ill.**



EXCELSIOR
HONEY EXTRACTORS.

In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets.

For 2 American frames,	13x13 inches	....	$8 00
For 2 Langstroth "	10x18 "	....	8 00
For 3 " "	10x18 "	....	10 00
For 4 " "	10x18 "	....	14 00
For 2 frames of any size,	13x20 "	....	12 00
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For 4 " "	13x20 "	....	16 00

ALFRED H. NEWMAN,
972 West Madison Street, Chicago, Ill.

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WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
1wly Hamilton, Hancock Co. Ill.

$777 A YEAR and expenses to agents, outfit free, address **P O Vickery Augusta, Maine.** 36wly

J. V. CALDWELL,
CAMBRIDGE, ILL.,

Wants every reader of the good old AMERICAN BEE JOURNAL to send his name and Postoffice address for a copy of his new Illustrated Circular of Bee-Keepers' Supplies. It may pay you to read it before ordering your supplies.

☞ Beeswax wanted. 3w26t

PRIZE QUEENS FOR 1882,
From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

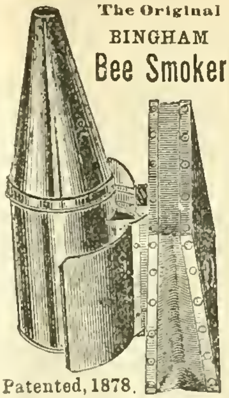
1882.-ITALIAN QUEENS.-1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby smoker for $1.50. Address all orders to

L. J. DIEHL.
(Money Order Office)—Butler, Dekalb Co., Ind.
10wtf

PRICE LIST OF
Choice Italian Bees and Queens,
mailed on application. Address,

W. J. DAVIS,
11w4t Youngsville, Warren Co., Pa.



"RED TAPE!"

Who will be the first to copy?

25,000 IN USE.

The Original BINGHAM Bee Smoker

If you buy the Original Patent Bingham Bee Smoker, you will aid the inventor of improved bee smokers—get the best, that never go out—always please—never is complained of—the standard of excellence the world over—better and handsomer this season than ever before. Price per mail, postpaid, from 65 cts. to $2. Our patents cover all the smokers that will burn sound stove-wood, or do not go out. If you buy our smokers and honey knives first, you will have to buy no others. Send for free description and testimonials, to

Patented, 1878.

BINGHAM & HETHERINGTON,
Abronia, Mich.

Bees and Queens

FULL COLONIES of ITALIAN BEES,
From my Apiaries.
QUEENS and NUCLEI IN SEASON.

☞ Satisfaction guaranteed. Circular on application.

J. H. ROBERTSON,
50wtf Pewamo, Ionia Co., Mich.

GOLDEN ITALIAN QUEENS.

-frame Nucleus, with Tested Queen	$4.50
2-frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1..	2.50
" " per half doz., after July 1	13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,
1wtf Burlington, Iowa.

EVERY ONE NEEDING ANYTHING

in the line of **Apiarian Supplies**, should send for my Descriptive Circular and Price List. Sent free. Address, **F. A. SNELL,**
3w13tp Milledgeville, Carroll county, Ill.

HEADQUARTERS FOR
Italian Queens, Bees and Fancy Poultry Eggs.

Send for Circular. **J. F. KIGHT.**
8w6t Poseyville, Ind.

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1wly **D. S. GIVEN & C.,** Hoopeston, Ill.

THE KANSAS BEE-KEEPER,

Devoted entirely to the best interests of those who keep bees. The question department, conducted by Dr. Wm. R. Howard, is of especial interest to beginners in bee-culture. Jas. Heddon will write a practical article for every number for 1882; 20 pages handsomely gotten up in book form. Every number worth the price of a year's subscription. Sample copies and premium list free to any address. Agents wanted. Address,

SCOVELL & ANDERSON,
28wtf Columbus, Kansas.

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying 22c. per pound, delivered here, Cash on arrival. Shipments solicted.

ALFRED H. NEWMAN,
972 West Madison Street, CHICAGO, ILL

The Bee-Keeper's Guide;
OR,
MANUAL OF THE APIARY,
By A. J. COOK,
Of Lansing, Professor of Entomology in the
State Agricultural College of Michigan.

—:o:—

320 Pages; 133 Fine Illustrations.

—:o:—

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—:o:—

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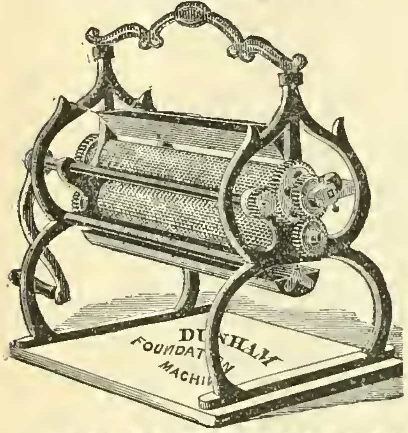

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items 226
Malicious 225
Honey Prospects for 1882 225
Rearing Queens 226
Deluged with Letters 226

Among Our Exchanges—

The Standard Size of Frame 227
Fastening Starters 227
Frauds 227
Out-door Feeding 227
"The King Bee" 227

Correspondence—

Criticisms from Bruce, Ontario 228
Producing Comb Honey—No. 4 229
Introducing Queens 229
Parthenogenesis in Bees 230
Dollar Queens Again 231
Holy Land or Syrian Bees 232
Florida as a Location for Bees 233

Convention Notes—

Local Convention Directory 233
Convention Notices 233
Bee-Culture in Colorado 234

Selections from Our Letter Box—

Wistaria Blossoms 235
The Hive I Use 235
Notes from Nebraska 235
Dollar Queens Again 235
What shall I do with them? 235
First Swarm Reported 235
Net Weight 235
At Last We Agree 235
Bees in Massachusetts 225
Bringing in Pollen 235
Early Drones 236
A Floral City 236
Doing Finely 236
Honey from Asters 236
Gathering Honey on March 1st 236
Paint for Hives 236
Bees Healthy 236
Last Year's Record 236
Roaches in Hives 236
Bees in Minnesota 236
Extracting before Swarming 236

Malicious.—The two bee papers for April, published in the state of New York, each contain malicious attacks on us by Mr. C. J. Robinson. Last year we published several articles written by him, some of which called forth criticisms from the Rev. L. L. Langstroth, T. B. Miner, Dr. Howard, Prof. Cook, A. R. Kohnke, and others. To these Mr. Robinson sent us replies full of abusive epithets instead of argument. On Jan. 2, 1882, we wrote him thus concerning a communication then sent us:

> CHICAGO, Ill., Jan. 2, 1882.
>
> DEAR SIR—Your letter and article are received, and I am sorry you are so "bitter" and *unnecessarily sarcastic* in your remarks. For that reason I have already delayed some of your articles, for it is better for you, as well as for others, that such a "spirit" as is therein manifested, should not be exhibited publicly. I have no objection to your having opposite views of parthenogenesis, or the "hive" of our much respected friend, Mr. Langstroth—but when you stigmatize such men as Dr. W. R. Howard, Prof. A. J. Cook, and others as "cranks," you offer an "insult" to all honest men, and degrade what should be a *fair* criticism, to the level of its now frequent use by a cowardly assassin (Guitean). Yours, etc. T. G. NEWMAN.

To this he has made no reply except the abusive articles in the N. Y. bee papers, whose editors will hardly be able to find any justification, for permiting him to use their columns for such malevolence. Should they refuse him, however, they will soon learn how small a matter will cause him to single them out for ridicule and abuse.

This explanation is due to our readers, but we shall take no further notice of Mr. Robinson—for one who has no more *manhood* than to malign Mr. Langstroth when mentally unable to defend himself, by reason of wasting disease—is unworthy of notice, say what he may. His abuse cannot injure us in the least, nor hurt our feelings.

Honey Prospects for 1882.

From nearly every quarter come cheering reports of the prospect for a plenteous yield of honey the coming season. The clover sward is generally reported as uninjured by the winter; fruit bloom promises to be unusually abundant; elms and maples are already blossoming, and very industriously worked upon by the bees everywhere, and are reported to be rich in nectar; basswood or linden will undoubtedly be much above an average, and we can see no good reason why summer and fall flowers should be below an average. Unless unpropitious weather should prevail for a lengthened period, the season of 1882 will be a glad one for bee-keepers who may find themselves in condition to take advantage of it.

We have yet to hear of a locality where bees wintered poorly; in fact, where the success of wintering was not far above the average, and they are all in condition to breed up rapidly, if properly manipulated. Messrs. W. Thomas & Sons, write us from Somerset, Ky., April 3d:

> Our bees are doing finely. Some of our colonies had hatching brood the first of last month, and are now breeding up strong. Peach bloom is about gone, and cherry and apple are just coming in. We look forward hoping for a plentiful honey season.

Our bees brought in their first pollen and honey simultaneously last Sunday (2d inst.), and breeding started up vigorously. Since then the weather has been variable, high winds prevailing most of the time with considerable rain, but we hope for a change for the better soon, and have every confidence in the succeeding weather. Bee-keepers have but little time to lose, if they have not already put themselves in condition to make the most of every opportunity which may be offered.

Rearing Queens.

A correspondent in Earlville, Iowa, asks for information bearing upon the above subject, and as there may be others desirous of more light, we will give a somewhat elaborate reply: He writes:

> I do not understand, in Italianizing my apiary (BEE JOURNAL, page 202), when the queen has been removed from my Italian colony for the purpose of obtaining queen cells, how eggs are deposited in these cells, the queen not being replaced in the Italian colony; and how am I to know when queen cells are ripe? Please answer in the BEE JOURNAL.

The bees will build the queen cells around eggs or larvæ, or remove the egg or larva and place it in the cell. Scientists and apiarists are divided in opinion as to whether the cell is constructed around the egg, or the egg placed in the cell by the bees. It is possible, nay probable, that both are right. We have seen several cases, in the course of our observations, which led us to believe that bees frequently remove eggs from one comb to another; if they may do so, for convenience or other cause, for the purpose of rearing worker brood, why may they not do so in the case of rearing queens? It would be improbable that a queen could be removed from a prosperous colony without leaving an ample number of fresh eggs or young larvæ from which to rear all the queens which may be desired. If, however, there is a doubt about the matter, an outside frame of honey may be removed from the brood chamber, and the remaining frames be then spread so as to admit of placing a nice, clean comb in the center, or a sheet of fresh foundation, and in three or four days the new comb will be found filled with eggs, when the queen can be removed.

If many cells are wanted, the following will be found an excellent plan: Remove from its stand the hive containing your most populous black colony of bees, and put in its place an empty hive; in this put four nice, clean, empty combs, leaving room in the middle for a fifth, and placing a division board at each outer side. The hive removed put on a stand three or four rods distant, and cage the queen securely; now take from the hive you wish to rear queens from a comb containing only eggs (leaving the queen in her own hive), cut off, say, one-third of the lower part of the comb, lengthwise from front to rear, put the frame with the remaining two-thirds of comb containing eggs in the center of the new hive; throw a blanket over the frames, put on the cover of the hive, and lay a board slanting from the ground to the entrance; now take out the frames one at a time from the hive removed, and shake and brush all the bees from the combs in front of the new hive, then replace the combs in the black colony and release the queen. The object in cutting the comb is to give a full, unfinished surface to facilitate and encourage the building of numerous queen cells, as bees seem to prefer mutilated spots for starting them, and they are easier removed from an extended surface, or edge, than if grouped, so that one cannot be cut out without injuring others. By adopting this plan, you not only secure a greater number of cells, but you know, also, that the queens are reared from very young larvæ, and, consequently, are fed on royal jelly from the time they are hatched from the eggs.

After about the seventh day from the time the larvæ are hatched, you will find the queen cells capped over. This capping will be quite rough and irregular, and have the appearance of being rudely daubed or plastered on the end with coarse wax. In ten days the worker bees will be working on the point; on the twelfth day the point will be trimmed down, and on the fourteenth will have lost its waxy appearance, and be dressed down quite smooth, when the cell is what is termed "ripe." These dates of time are based upon cells built with only eggs in the hive. We have known queens to emerge in about twelve days after the colony was made queenless, but these were undoubtedly reared from much further advanced larvæ, and such queens are generally supposed to be not as good.

Several objects are gained by artificially swarming a colony to rear queens as above, chief among which are: 1st. Greater number of queen cells; 2d. No drones are reared in the hive, as they have no male eggs from which to rear them; 3d. The parent Italian queen is still left in her own stimulated colony to rear Italian drones; 4th. A good cell can be left in the hive, to Italianize the black colony; 5th. There will be no hatching black bees to add confusion in testing the young queen. 6th. There is but one fractional frame of brood to divert the cares of the bees from their queen-rearing.

Forty-eight hours before cutting out the queen cells, form nuclei for as many queens as you wish to rear, or as you may have good cells, by taking a frame of sealed and hatching brood, and placing, with an empty comb, in a hive with division boards each side, then close the entrance and fasten the bees in for 24 hours, and on the following day, cut out and graft a queen cell in each nucleus. Combs or foundation can be added to the nuclei from time to time as they may be needed. In twenty-one days after the young queens are mated and begin laying, their progeny should be emerging from the cells. Many other plans are practiced besides those described above, but none, we believe, more simple in detail and as satisfactory in results.

* * *

☞ Mr. H. Jones, Chesaning, Mich., kindly sends us an item entitled "Glucose," credited to the *N. Y. City Item*. We have already published the substance matter of the article—in fact, it is partly made up from editorial matter in the BEE JOURNAL, and for which, by some oversight, we failed to receive proper credit. We are always pleased to receive these items, as it is not only an indication that our patrons are *in accord* with us in our efforts to effect needed reforms, but they frequently bring to our notice transactions which we might otherwise overlook, or have no opportunity of observing. It also affords us pleasure to be able to assure our readers that the public are rapidly becoming aware of the baneful influence of food adulterations, and that even Congress seems inspired to attempt a reform in the matter. *Nous verrons.*

* * *

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* * *

☞ Mr. J. W. Margrave, of Hiawatha, Kas., reports that J. V. Cornell, a young bee-keeper of that place has "left for parts unknown," leaving a young wife and babe to the tender mercies of a *cold* world. Mr. M. adds: "He ought to be published in all the bee periodicals as a base villain." Pass him around.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

The Standard Size of Frame.—The London *Journal of Horticulture*, says:

A meeting of the special committee appointed by the members of the Association at the recent general meeting, held on Feb. 15, for the purpose of determining the form and size of a standard frame for general use throughout the United Kingdom, was held at the Langham Hotel, on Thursday, March 16. Present: Messrs. T. W. Cowan (in the chair), C. N. Abbott, F. Cheshire, J. M. Hooker, A. Neighbour, Rev. G. Raynor, and the Rev. F. T. Scott. Mr. J. G. Desborough was unavoidably prevented from being present. After the consideration of a large amount of correspondence, and the question having been fully discussed, it was unanimously resolved that the outside dimensions of the standard frame should be 14 inches long, 8½ inches deep; the top bar to be ⅜ of an inch thick; bottom bar ⅛ of an inch thick; side bars ¼ of an inch thick. These dimensions do not refer to anything outside of the rectangle. It was also resolved that standard frames duly stamped should be provided at one shilling each.

◆

Fastening Starters.—Dr. C. C. Miller, Marengo, Ill., gives the following suggestions in *Gleanings* for April:

I have had some trouble with foundation dropping out of sections just at the most annoying time when honey is coming in with a rush, and every minute counts; and I suppose others who use full-size starters are not entirely free from this trouble. Where they have been fastened with Parker's foundation fastener, I have found it to occur either where the starter was put in too cold or where too big a "bite" was taken by the fastener. I have been putting in several thousand starters in sections with my own hands, and apprehend less difficulty the coming season. I formerly supposed that I could not well put in starters in cold weather; but I now prefer winter. Perhaps I had better tell you just how I do it. I do the work in the kitchen. The fastener is screwed tight to a board which is clamped tight to a table, the fastener being close to the edge of the board nearest me, the length of the fastener running parallel with the board, and the handle at the right side. The table without the board would be as well, or better, only I do not want to drive screws in the table. Just beyond the fastener I put a pile of, say, 50 starters, and at the left of the pile stands a hot flat-iron, such as the women-folks use for ironing, while another iron stands on the stove ready to replace this one when it gets cold. Seated on a seat 6 inches higher than an ordinary chair (I put a chair on a hive cover), I am ready for work. The edge of the starter next the flat-iron is heated so that it is quite soft; I care little how soft, so that none of the starters are actually melted. This soft edge is the one, of course, to be mashed down by the fastener, and the object is to get as small a "bite" as possible, only so that a little of the wax is actually mashed the whole width of the starter. The ordinary direction is to put the foundation under ⅛ inch, which I think quite too much. Instead of "turning the piece of foundation up against the end of the lever," as usually directed, I leave it lying flat till I pick up the section; and on turning the section right side up, the foundation will, by its own weight, be found hanging right every time without any attention.

◆

Frauds.—The punishment of frauds and adulterations is now commanding much attention. The New York *Tribune* of March 21st, gives the following item:

Some of those oily reformers who cry so loudly now for anti-monopoly may soon have an opportunity for reform that will be in their own immediate grocery line. Considerable progress is reported toward making laws of the bills at present under consideration in the State Legislature to prevent the sale of imitation butter, and to do away with the fraudulent use of glucose and the like. The Anti-Oleomargarine bill passed the Senate yesterday.

◆

Out Door Feeding.—From the *Bee-keepers' Magazine* we copy I. L. Scofield's (Chenango Bridge, N. Y.,) method of feeding bees in the open air:

He makes a box 3x3 feet square, 2½ feet deep, and hangs two pans, 5 inches deep, 30 inches long, and 10 inches wide, down in the top of the box. Cut a door-hole in one side, to put the lamps in under the pans; these are common kerosene oil lamps. Put the feed in the pan, and a float on it, so the bees will not sink it, and get daubed; regulate the lamps so that they will keep the food about 85° to 90° F. Put the box in some sheltered place in the yard; put some boards up to keep the cold winds from it. Every day the bees can fly with safety, have this feeder ready for their use, the feed quite thin. Sap from the maple tree, with a little extra "C" sugar added, makes a good feed; there is no danger in using "C" sugar when the bees are flying every day or two. The bees fly from the hive, and get the feed in the natural way, and when they fill their sacs with feed at a temperature of 85° to 90° F., they are in as good condition to get home to the hive as they were to get out of it and fly to the feeder, and you lose no bees as you do by their filling their sacs with cold water at the creek, or some other place, then tremble and shake for some time, and if the sun clouds over they never return to the hive, but if it shines out brightly they will come back with a load of water, to thin their honey so they can raise brood. The bees all stay at home until there is pollen on the trees and they can fly with safety. The two pans will feed a yard of from 60 to 80 colonies. The pans and float must be kept clean, and the feed not let get sour. This management makes a little summer for the bees just when it is most wanted.

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"The King Bee."—Mr. J. M. Hicks, in the *Grange Bulletin*, relates a little of his experience as follows:

Bees throughout the country have wintered well. Now and then we visit farmers who keep and have kept bees for many years, and find that they think the "king bee" is monarch of the hive and boss of all the other bees. Sometimes they still have it that the old king lays all the eggs and produces all the bees. We quite often get a rebuff from such ignorance. We cannot help but feel sorry for them and in several instances have changed Italian queens with such in order to prove our assertion—first capturing the native queen and then introducing the Italian queen at once before the eyes of my Old Father Luck, and as per agreement, if the bees were not of a different color from the occupants of the hive in 65 days, I should lose the Italian queen and pay Old Father Luck ten dollars for the native queen destroyed, but if otherwise, then they were my bees, free of charge. You may guess I carried the bees home, and the old gent is wiser than he was before.

CLUBBING LIST FOR 1882.

We supply the Weekly **American Bee Journal** and any of the following periodicals, for 1882 at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00	2 60
Bee-Keepers' Instructor (W.Thomas)	2 50..	2 35
The 4 above-named papers	4 50..	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 7 above-named papers	6 30..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) ..	2 40..	2 25
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

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Premiums.—Those who get up clubs for the Weekly Bee Journal for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

CORRESPONDENCE

For the American Bee Journal.

Criticisms from Bruce, Ontario.

J. ANDERSON.

The articles written by some of the Bee Journal correspondents show that the writers have much yet to learn connected with bee-keeping; while others clearly demonstrate that their authors are no mere novices.

There can be no good reason why bees should die, as last season, where the winter is only of eight or ten weeks' duration. Nothing but injudicious and improper treatment could cause their destruction in such localities. If men, for the sake of adding a little more to the gains of the season, rob their bees of the good and wholesome food which nature teaches them to store up for the stormy day, and then scantily supply them with that which is unwholesome, or if they deprive them of the full amount of heat so essential for the cold nights of winter, by an undue number of swarms and divisions the previous season, or by boring holes in their boxes, or scraping away the plaster by which the little things so industriously exclude the cold air from their combs, without supplying them with substitutes, then it is but just that such persons should find out that nature is wiser than men, and that their imaginary gains are but real losses.

I seldom lose a colony during the first three months of winter's confinement. Of course, I winter within doors. I have found out by hard experience, that outside wintering will never do where the winter is severe and long, and the elements changeable, as in Bruce. Any losses worth noticing, which I sustain, occur about the end of confinement; after the bees are shut up without light or liberty for about five months, as they were last winter; nor do such losses occur through any disease among the bees, but simply for want of food. Some bees consume far more food than others; and it is difficult, indeed impossible to test, on this point, before winter, the progeny of young queens, so as to know the gluttons from those more sparing of their winter supplies. I have had some colonies which consumed between 60 and 70 pounds of food during winter, and died of want; while others, about the same strength, wintered well aside them without consuming a quarter of that amount. Not a single tear was shed over the grave of those gluttons.

I highly value and largely indorse, the able and interesting articles which recently appeared in the Journal from the ready pens of Messrs Dadant and Heddon; but would not, on any account, adopt all their views. To exclude pollen from the bees during a long winter would, in my humble judgment, cause their ruin. It is true I may be mistaken, as I never tested it, but the opposite I have tested to my entire satisfaction. I have been the keeper of bees for 30 years, and for half that period it has been my uniform practice to follow the bees' own habits, and place frames with bee-bread within reach of the bees during their winter imprisonment. Now, I flatter myself with the idea that my bees always winter well; so well, that I find but few dead bees in many of my hives when taken out; not a cupful in some of them; so I have no more fears that my bees will die in winter, than that my horse or cow will die. These will certainly die, if not properly attended to, and so will my bees. They must be attended to at the right time. This success in wintering is reached by little and little. Experience will teach the inteligent bee-keeper that the same identical practice will not secure perfect success in all kinds of winter receptacles, and that, while general principles are never to be violated, yet in numerous details, the apiarist must largely draw upon his judgment and experience, according to circumstances and the state of his bees. One essential principle in wintering is, to keep the bees still. Excitement or restlesssness is sure to cause diarrhea, and, finally, death. This restlessness may be caused by the want or loss of a queen, by too much heat or cold, by unhealthy food or scarcity of food, or by dampness, or any external disturbance. A flight in winter is unnecessary; for it does more harm than good, when the bees are wintering well. Some seem to have an impression that healthy bees retain in their intestines all the food they consume during their confinement. But this is not the case; when bees winter well, they discharge their feces very freely, but what they pass is as hard as wax.

In the numerous reports of winter losses, given last season in the Journal, spring losses, or spring dwindling, was not given. This oversight is a misfortune, for spring dwindling is as great an evil as winter losses, and the one as difficult to overcome as the other. If our colonies are not strong, in the beginning of summer, when the blossoms appear, then our honey harvest will be a failure that season, especially in localities where fall blossoms are scarce. How is this common evil then to be met, is a question of vast importance to many? Numerous remedies are, of course, proposed; but many of them are worthless. Late fall breeding is good as far as it goes, but early spring breeding, in my experience, is far better. If young bees are hatching in large numbers, just when the hives are put on their summer stands; then there will be no fear of spring dwindling. But how is this early breeding to be produced without an undue excitement of the bees? Can any one tell? Sometimes I have had the pleasure of witnessing it without any effort on my part to produce it. Where bees have plenty of good honey and pollen during their confinement, and are wintering well, breeding will be commenced before the bees can with safety be put on their summer stands. Deprive the bees of their pollen, and this would be impossible. When I took out my bees last spring (April 10th) I found, to my pleasure, that about as many young bees were hatched as there were dead in the hives, and as large numbers were hatching every day, dwindling was not perceptible. I am not prepared to say that there is more dwindling in spring than in summer or fall. I know, we readily speak of the age of bees, and fix the number of their busy days; but are we certain that we are correct? Does not excessive labor make a bee old? Old age is not the only thing that destroys bees. The bees that I winter do but little work, as our fall blossoms are but scant, and the bees having plenty of food in their hives, do not expose themselves very much in search of those flowers; they can, therefore, do a large amount of work in spring, after their 5 months rest. Of this I am satisfied, that a large number of the same identical bees that occupy my hives in September may exist and actively labor in June the following year, perhaps longer. This I have frequently proven by colonies that lost their queens early in spring, when I had none to give them. Let a strong colony be left without brood or queen when honey is abundant in the fields, and then we shall witness a greater dwindling than anything we ever experienced in spring. The grand remedy then for spring dwindling, or rather its preventive, is early breeding, together with prolific queens. To have early breeding we must have plenty of pollen in our hives, and to have prolific queens we must learn to distinguish such queens from those that are worthless, and should never be wintered.

In drawing my remarks to a close—which I fear are already too lengthy—let us have a word or two connected with the stings of bees. How different the effects produced by the small drop of poison attached to these fine weapons! Some men care nothing for it, and I have the fortune to be of that favored class. Bee stings never trouble me, though scores of them get to my blood at once, consequently I use smoke but very seldom. If my bees make an attack upon me—well, let them do so; for I have been in the fault. Something occurred that might have been prevented; and by their sharp weapons they teach me to be more careful in my next visit to their home. But all are not of this class; some have a fearful dread of bees, and can only approach a hive with trembling, as they know the sting pains and disfigures them. But there is still a third class of persons who have a greater reason to be afraid than those last alluded to, for the effects produced on them by a single bee sting are most serious and alarming. The eyes become bloody, suffocation is experienced, coughing is produced, vomiting sets in, the whole body becomes covered with large blisters, and the whole circulation of the blood is interrupted. All this occurs in less than five minutes, and the result, I believe, may be fatal, if no aid is given. Can any of your numerous correspondents tell us how such cases are to be treated? If there be an unfailing remedy, all bee-keepers should know it. The only remedy familiar to me, consists in the use of good brandy for inward stimulation, together with a cold sponging of the body. But a better remedy may be in use; if so, let us know it.

Bruce County, Ont.

For the American Bee Journal.

Producing Comb Honey—No. 4.

G. M. DOOLITTLE.

After getting our bees all in proper condition, and the boxes put on as I have before described, the next thing which will be liable to occur will be swarming. After trying all the plans of non-swarming hives given, with no success, I settled down to the conclusion that such a thing did not exist when working for comb honey, and even if it did, I doubt if as large a yield of honey could be obtained, as by the use of swarming hives. Then if we are to use swarming hives the question coming next, is, shall we make our swarms by dividing or by letting them swarm naturally. Lately I have used both ways with what seemed to me the best results. It will be seen that our bees are all in readiness 15 days before the height of the white clover harvest, and where this is the main dependence for honey, all swarming should be done within the next 5 days. In this case swarming would have to be done largely by division, but as basswood is my main honey crop, coming about July 5, I do not practice artificial swarming, only so far as is necessary to have all swarming done ten days before basswood opens. All swarms issuing previous to 15 days before basswood, are hived singly in hives containing frames of empty comb, and in a week from time of hiving the boxes are put on, in the same manner described before. Those issuing the next 5 days are hived two swarms in a hive, when convenient to do so, and the full complement of boxes put on at once. If not convenient, the new swarm after being hived is set on the stand of another hive which has not swarmed, and such colony changed to a new location, thus securing to the new swarm all the field bees from the colony moved. Each swarm thus made has given them a hive full of empty combs and the boxes are put on at once. Thus it will be seen all the new swarms are in splendid condition to take advantage of the basswood harvest as soon as it commences.

Where I hive two swarms together, the queen belonging to one of the old colonies is let to go back, when such hive is moved to a new location and the double swarms set in its place. The old colony losing their queens by their going with the new swarms, are allowed to rear their own queens, as (after thoroughly trying the plan of) giving each colony a laying queen immediately after swarming, has not proven a success with me. Eight days after a swarm has issued from a hive I open it, and, having ascertained that a queen has emerged from the cell, by finding one open at the end, I cut off all the rest and thus stop all second swarming. These cells thus cut off are placed in nucleus hives, if I wish more queens. By waiting till the first queen has hatched, I have a certain thing when the cells are all off, which is not the case where all but one cell is taken away 4 or 5 days after swarming, for the bees will often rear queens from the larvæ there is still in the hive at that time, and also the cell thus left will often fail to hatch.

When I think basswood will open in about 10 days, I proceed to make swarms from all the rest which have not swarmed as follows: A hive is filled with frames of empty combs and placed upon the stand of one of these colonies which have not swarmed, and all the boxes are taken off and placed thereon, then all the bees are shaken and brushed off their combs of brood and honey, in front of this prepared hive into which they will run as fast as shaken off. Thus I have a colony that is ready for "biz" as soon as the honey harvest comes, as they have the queen, bees and part-filled boxes all in readiness for work. Previous to this, nuclei have been started, so that I have plenty of laying queens to use as I need them.

I next take all the combs of brood from which the bees were brushed, except one, arranging them in the hive the bees were shaken out of, and carry them to the stand of another colony which has not swarmed. Next I take the comb of brood which was left out and go to one of the nuclei, taking out the frame having the laying queen on it, and place the comb of brood in its place. Take the frame, bees, queen and all, and set it in the place left vacant for it when arranging the combs of brood. Now put on the boxes, and, having all complete, I move the colony to a new stand, and set the prepared hive in its place. Thus I have a laying queen and enough of her own bees to protect her, together with a hive filled with combs of brood and all the field bees from the removed colony. In a very few days these colonies are ready for the boxes, and generally make the best colonies I have for storing honey. The loss of bees to the removed colony stops the swarming impulse, and in about a week they have so regained their loss, that they are ready for the boxes again.

It will be seen my aim has been, in using these several plans, to get all my bees strong enough to work in the boxes (during the best harvest) to advantage, and still have none of them desire to swarm right in the height of the best flow of honey. By adopting a plan called "nucleus swarming," I once had my bees (after an early division) nearly all swarming right in the height of the honey harvest, by which I lost at least $500, for swarm they would in spite of all I could do, and while the swarming fever is on but little work will be done in the sections, as all apiarists know. This taught me a lesson; I hope to profit by all such lessons, else why the use of learning them. My next will be working these boxes so as to get the largest yield possible, and taking off boxes.

Borodino, N. Y.

Farmers' Home Journal.

Introducing Queens.

G. W. DEMAREE.

Who was the first to discover that queen bees could be removed from strong colonies, and others introduced in their places, I am not able to say; nor do I suppose that it is important to know. But that it can be done with as general success as any other important operation that requires skill and patience, I have fully demonstrated to my own satisfaction. I have paid particular attention to the many slightly differing methods resorted to, to induce bees to accept of a strange queen, and it would really appear that every apiarist claims that there is something original about his plan of proceeding.

It is worthy of note, however, that no matter how you may proceed there are certain features about the business that is essentially common to all methods and must be present to insure general success, viz: 1. The colony to which a queen is to be introduced must be queenless, and free from the influence of those pests called "fertile workers." 2. There should be no sealed queen cells. 3. The queen must be "introduced" to the bees, *i. e.*, placed in such a position that the bees can make her acquaintance without the danger of her being attacked by them if they are hostile to her at first, as they generally are disposed to be.

There are exceptions, however, to all rules. Some colonies will accept a strange queen without any trouble, while others will resist in the most stubborn and determined manner. A prominent writer thinks that there is, perhaps, one colony out of a hundred that cannot be induced to accept of a strange queen, but I have never met with one that I could not subdue, though I have on a few occasions had to resort to severe measures to accomplish it.

The first important thing to learn is how to find and remove the queen to be superseded. This operation is always a puzzle to the novice. In fact, I know of no operation, the success of which depends so much on practical knowledge and an actual practice. I doubt very much if it is possible for an inexperienced person to hunt up and remove a queen from a strong colony. But if he will commence to practice on small colonies where the bees are few in number, and learn to look up the queen, observe her habits, etc., he will soon be able to find her in any colony.

In looking up the queen in a strong colony, I put an empty hive near at hand and commence to remove the frames, one at a time, looking carefully for the queen, setting the frames in the empty hive till all have been removed; then look carefully for the queen among the bees left in the hive. If the queen is not yet discovered I return the frames, one at a time, looking them over again till I find her. I rarely ever fail to find her in fifteen minutes of time.

Christiansburg, Ky.

* * *

Scientific American.

Parthenogenesis in Bees.

PROF. C. F. KROEH.

Recent experiments of the Abbe Giotto Ulivi call in question the theory of parthenogenesis, which is at present almost universally received by bee-keepers and other entomologists. Briefly stated, this theory is that queens, while yet in the virgin state, may lay eggs capable of hatching, and that such eggs always produce drones. After the queen has mated with a drone and stored up the spermatic liquid so received in a little vesicle, she may lay at will either drone or worker eggs, according as she does or does not compress this little vesicle at the moment the eggs pass it. Some of the evidence on which this theory rests may be found in an article entitled "Modern Bee-Keeping, No. IV.," in the *Scientific News*, November, 1881, page 345. The received theory also requires that queens and drones can mate only when flying, and that the drones perish in disengaging themselves because they cannot withdraw their organ.

All this is denied by Ulivi. He constructed flat observation hives, in which 3 combs were placed, one above the other. The two sides were of glass and could be darkened with shutters. Each hive was furnished with a closed tin portico having glass slides and a trap which could be so adjusted as to allow or prevent the passage of queens and drones. By the aid of these hives he performed three series of experiments. In the first series they were filled with bees, stores of honey and pollen, worker and drone brood, and queen cells sealed and unsealed; in the second series the queen cells were left out; and in the third there were no queen cells, drones, or drone brood. In none of the experiments was a queen put into the hive. He then made the following observations:

In five hives the queens, without leaving the hive, were fertilized and laid eggs that hatched into workers and drones.

In four hives he saw the queen mount a drone and curve down the extremity of her abdomen so as to bring it in contact with his virile member. This organ was at least 3 times too thick to be inserted into the vulva. Fertilization must, therefore, take place by mere touch. Indeed the fertilization of small Egyptian queens by large Italian drones could take place in no other way.

In two hives newly hatched queens were allowed to fly and were captured on their return. They brought with them the ordinary whitish appendage to their abdomen, which has hitherto been regarded as the wrenched-off organ of the drone and the evidence of impregnation. On examination under the microscope this appendage was found to consist of excreta entirely soluble in water and containing no fleshy filaments. The drones of these hives were then imprisoned, and the queens returned to their hives. They laid eggs regularly, but these eggs never hatched. Then the drones were liberated in the hives, the queens mounted them, and the eggs they laid after that, hatched into workers and drones.

In three hives the newly-born queens were allowed to fly several times until they returned with the usual appendage to their abdomen. Then they were confined in hives containing no drones or drone brood. One of them did not lay at all. The other two laid eggs regularly, but these eggs never hatched. The two laying queens were then killed and examined, and the three nuclei united and put away for winter. The surviving queen never laid an egg. The following January she was also found dead and examined. In March the colony had neither an egg nor a drone, although there had been plenty of time for a fertile worker to develop if there were such a thing.

It is generally believed that one fertilization lasts a queen for life; but Ulivi saw three queens that had laid fertile eggs refertilize themselves by mounting drones.

He dissected five fertile queens and removed mature eggs ready to be laid from their oviducts just before they passed the spermatic vesicle. These he substituted for others that had been freshly laid, removing the latter to other cells, and isolating both from the other eggs in the hives in which the experiments were tried. The removed eggs hatched, but those taken from the oviducts did not. Under the microscope, 6 days later, they showed no embryos nor any indication of vitality.

He isolated queens from drones for 20 days and dissected them. Their spermathecas were empty.

He caused queens to hatch in cages, so as effectually to exclude drones, and kept them caged for a long time. On dissection their spermathecas were found empty. The eggs they had laid never hatched.

He caught queens on their return from their so-called wedding flight. Although they brought with them the whitish appendage supposed to be the male organ of the drone, the microscope showed their spermathecas to be entirely empty.

He dissected 30 queens just hatched, and found their spermathecas empty.

He captured a young queen immediately after she had mounted a drone, and found her spermathecas distended and filled with liquid.

He concludes that Leuckardt, who dissected a drone-laying queen, and found no spermatozoa in vesicle, but only a clear liquid, erred in pronouncing her unimpregnated. The clear liquid in the spermatheca was nothing but drone semen.

Having had occasion to transfer a large number of colonies from old-fashioned into movable frame hives, he observed that, contrary to the established belief, old queens do not lay a disproportionate number of drone eggs. They laid fewer eggs than young queens, but the number of worker eggs greatly exceeded that of drone eggs.

Signor Ulivi, therefore, maintains:

1. Queens are usually fertilized inside the hives.
2. They are fertilized several times.
3. Drones are not mutilated in the act of copulation. It should have been mentioned above that he several times examined all the drones in a hive in which impregnation had taken place, and found none of the drones lacerated.
4. Every egg that hatches into a male or a female has been previously fecundated with drone semen; hence there is no such thing as parthenogenesis in bees.
5. Every queen whose spermatic vesicle is distended and filled with any liquid whatever has been fertilized.
6. The eggs of a queen that has never met a drone will not hatch.
7. There is no such thing as a fertile worker.

To explain the last conclusion it is necessary to add that Ulivi found by experiment that fertile eggs will keep through the winter and will hatch in the spring. Hence some who have put away colonies queenless in the winter and found brood in them in the spring have been deceived into believing that a worker had assumed maternal duties.

These experiments and conclusions are of the greatest scientific interest as well as of practical utility. If confirmed they will entirely revolutionize an important branch of the bee-keeper's industry. The author hopes to have an opportunity of testing the matter by experiment. Comments not supported by experiment would be of little value.

Hoboken, N. J.

[We are under obligations to several correspondents for sending us copies of the foregoing startling article, but had anticipated them by clipping it from the *Scientific American*. The deductions arrived at by the Abbe Giotto Ulivi are certainly astonishing in their boldness, and, if even partly correct in his conclusions, will not only revolutionize long-accepted theories, but will open an interesting field for experimentation to scientists and breeders; if true, fertilization in confinement can be easily and certainly accomplished, and the "coming bee" will only await the exercise of a little persevering patience, and a discriminating judgment to determine its most desirable features. We advise, however—be not too credulous.—Ed.]

For the American Bee Journal.

“Dollar” Queens Again.

W. Z. HUTCHINSON.

MR. EDITOR: You say, had I copied the sentence entire, it would have given the impression that where one might economize more, scores of prudent breeders would far exceed Mr. Salisbury's expenses; which is exactly as I understood the matter; and I then asked you to go into details, and show in what particulars a prudent breeder could be more extravagant. In reply, you say that you have cited several cases where experienced and extensive breeders have found the cheap-queen traffic undesirable, which may be true; but it does not answer my question; or, rather, my simple request has not been complied with.

No, Mr. Editor, you did not use the word "stripes," and I fail to see where I quoted you as using it. It is true that I enclosed the word in quotation marks, but it was done merely to show that I used it in a peculiar sense, as is often done when a word is used in a new or uncommon manner. My reason for employing the word is, that I understood that queens were usually tested in regard to the "stripes" of their progeny. But let us suppose, for the sake of argument, that tested queens are tested in regard to business qualities, what is there to prevent a dishonest breeder from sending out a non-prolific queen as a tested queen, provided that she produces bees with the requisite number of "stripes?" If the purchaser grumbles, he can be told that perhaps she was injured in shipping, or in introducing, or that his method of management may be defective, or that the yield of honey may not be large enough, etc. The prolificness of a queen is such an indefinite quality. To get right down to the bottom of this matter, it all depends upon the breeder (this you substantially admit, in your remarks about Dr. Brown); if the breeder is honest and conscientious, he will rear queens in a proper manner, and will send out only good queens; while a dishonest breeder will cheat his customers, if he can; and it makes little difference whether said customers buy "dollar" or "tested" queens. I have recently written to several of the leading queen-breeders, asking them if their "dollar" or untested queens were reared in a different manner from their tested queens, and if they considered their tested queens superior to their untested queens, except that they knew how the tested queens were mated. They all agreed in saying that their queens were all reared in exactly the same manner, and that they did not consider their tested queens superior, except that they were known to be purely mated; or, in other words, they tested their queens in regard to "stripes," and nothing more. If necessary, I can give the names of these breeders.

In using the words "hybrid queens," in the third paragraph, I did not intend to convey the idea that you had used the words. I was merely anticipating what you might say in reply. I will admit, however, that it would have been better had I so worded the sentence that there could have been no mistaking its meaning, but I supposed that the context would make it all clear.

You say: "But when a 'tested' queen is bought or sold, it is supposed her progeny will prove among the best for all desirable qualities, as well as possess the 'three bands,' which are only a 'test of purity,' or pure mating." Quite often, when reading your editorials, I have found myself almost envying you your command of language, but if ever you put the right word in the right place, it was when you used the word "supposed" in the above quotation.

You say that my citation of the case of Dr. J. P. H. Brown establishes no point, except that the Doctor is an honest, conscientious gentleman, etc. When H. P. Sayles obtains "dollar" queens from Dr. Brown, and these queens prove so excellent that Mr. Sayles is willing to rear queens from them, does not this establish a point, fully as much as your mere assertion that, "we do not believe, among them all, there is one who is reckless enough to expect to buy a single queen for $1, or 100 queens for $65, which would be fit to rear even untested queens from?" You say that "Dr. B. states in his circular that all his queens are reared from imported stock. They are not reared from 'dollar' queens." Where is the breeder of any pretensions or reliability, that does not rear his queens from imported mothers, or from well-tested home-bred mothers? Where is the breeder that rears his queens from "dollar" queens, without first thoroughly testing them? After a "dollar" queen has been tested, and found to be an excellent queen, is she not fit to breed from? In other words, does it make any difference who tests a queen, *i. e.*, the breeder, or the purchaser?

Again I agree with you, Mr. Editor, when you say: "The bee-keepers of America want the 'best bee,' and to this end all bees should be tested before leaving the hands of the breeder;" but I do not agree with you in thinking that all, or even a majority, of the so-called "tested" queens are tested for their "best business qualities."

REPLY TO MR. SALISBURY.

Mr. Salisbury, you say that "the advocates of untested queens rely but little upon their own arguments." Did I not give my own experience as an argument?

No, Mr. S., I am not a sloven, and neither am I stingy, and I do like to see a neat advertisement, just the same as I like to see a neatly dressed individual; but I do not like to see a person showily dressed, neither do I see any great beauty in a spread eagle advertisement. In my opinion, a plain, neat, straightforward advertisement is fully as artistic as one of the spread eagle style. If you prefer displayed advertisements to having the balance upon the right side of the ledger, and you can afford such indulgencies, I do not know that it is anybody's business but your own. You say that I know, as well as any of us (from reports made on glucose), that it is inferior and unhealthy food, compared with good granulated or coffee A sugar, or honey. Mr. S., you know, as well as any of us, "from reports made," that there are different grades of grape sugar, that some grades are impure, while others are practically pure. It was the best quality that I used. I used it only one season, and probably shall never use it again; simply because I have doubts as to whether it is any cheaper, in the end, than the best granulated cane sugar. You say that it (grape sugar) was hard on the constitutions of the embryo queens. How do you know that it was? Did you ever rear queens by feeding grape sugar, or do you merely "guess" how it would operate? The queens reared when I was feeding grape sugar were as fine looking, as prolific, and as long-lived as any that I have ever owned. But, for argument's sake, let us suppose that I had fed coffee A sugar, and, still further, let us suppose that I had found it necessary to feed the same number of pounds as I did of grape sugar, this would have increased my expenses only $24, and there would yet have remained a large profit.

You seem to intimate that, in order to make a good showing, I purposely estimated my surplus honey and increase of colonies at a high figure. Did I not explicitly state that the figures given were a *bona fide* account? By the way, you have not yet told us whether the balance sheet that you gave is real or imaginary. My honey was sold at home for 15 cents per lb., and my bees were also sold at home, at $7 per colony; but, as all queen-breeders might not be so fortunate, let us again suppose, for the sake of argument, that the honey was sold for 10 cents a pound, and the bees at $5 a colony; this would reduce the profits $38. To this add the $24 that we supposed my expenses would have been increased had I fed coffee A sugar, and we have a total of $62, and yet the profits are $140 80. Surely, Mr. S., you do not suppose that I would resort to deception in order to sustain an argument? I care not one iota which one of us "gets the best end of the argument" if we only arrive at the truth. When I mentioned that I used grape sugar, I felt quite certain that, if you did reply, the burden of your reply would be "grape sugar," "glucose," "cheap food," etc. How easily I could have avoided mentioning what it was that I used for feed, but these arguments do the most good when they bring out facts.

You say that I acknowledge that I allowed nothing for time spent in rearing queens. Did I not say: "But if I should deduct $160 for my labor, do you not see that there would yet be a good profit?" Farther on I said: "If I deduct $160 for my labor, my profits would average about $10 per colony, each year." That there yet remained a good profit, after deducting a proper amount for labor, you simply ignore. You also "slip" over that part of my article where I show the extravagance of some of the items in your balance sheet., "500 cages, $50;" "lamp nursery and oil, $7." If the figures in these two items were reduced to a reasonable amount, the laugh would be upon the other side of your face.

Again you say: "It may do for a man of leisure, or boys that have nothing else to do, but preposterous for a man of experience, with a family to maintain and children to educate." Under which of these heads, Mr. S., do you class yourself? I have a wife and three children to maintain; this I do, principally, by rearing "dollar" queens; is not one such fact as this worth more than column after column of theory and argument?

CORRECTIONS: Words left out, and improper punctuation, make nonsense of the fore part of the second paragraph, in my article on page 183; it should read as follows: "You speak of breeders making a specialty of tested queens, and availing themselves of the untested feature to work off worthless trash. What is there to hinder a breeder from working off worthless trash in filling orders for tested queens, provided, that the 'worthless trash' produces bees with the requisite number of 'stripes?'"

In my illustrations of buying "dollar," "warranted," and "tested" queens, (see third paragraph, same article and page) the "warranted" queens were not mentioned; I presume that it was a compositor's mistake. By the way, Mr. Editor, you did not say which lot of queens you thought would be the best.

Rogersville, Mich.

[Our correspondent very concisely and fairly sums up the whole gist of this controversy with us in his seventh paragraph above, as follows:

> Again I agree with you. Mr. Editor, when you say: "The bee-keepers of America want the 'best bee,' and to this end all bees should be tested before leaving the hands of the breeder;" but I do not agree with you in thinking that all, or even a majority, of the so-called "tested" queens are tested for their "best business qualities."

The third paragraph frankly admits his quotation was only in anticipation of what we might say, and, of course, the argument, we suppose is lost until we are prepared to make the assertions which they may cover.

He admires our ingenuous manner of using the "right word in the right place," and again agrees with us, as is evident upon reading his fourth paragraph.

The interrogatory in the first paragraph was not answered, simply because a difference in opinion or judgment of different breeders, would induce one to be more lavish where another would be more economical, and *vice versa;* as, one might pay high prices for good stock to rear from, while another might suppose cheap queens good enough to rear cheap queens from. We have had no experience in rearing cheap queens for the market, but the evidence of experienced breeders is cumulative that they could not make it remunerative.

The second paragraph scarcely requires notice, notwithstanding its length. He admits that we did not stick for stripes; we in turn admit it is possible for queen-breeders to be deceptive, and all must admit it savors much of free advertising for cheap queen dealers.

His fifth paragraph is summed up in the last three lines, and we answer, "no."

And while there is no difference of opinion between us on the general issue, as quoted, we can scarcely appreciate the necessity for continuing these lengthy discussions, where the last word will be gained only by an ingenious "play upon words."

With the future we leave the determination of the verdict as to "dollar" queens, as we have no wish to prolong these wordy discussions. In general they become mere individual contests, productive of no good, and detracting from the general interest of the BEE JOURNAL. While we gladly welcome all correspondence which has a tendency to develop scientific bee-keeping or inculcate progressive ideas, we cannot but deplore the tendency to weary the reader with personal explanations or illogical arguments.—ED.]

For the American Bee Journal.

Holy Land or Syrian Bees.

E. A. THOMAS.

As there are many bee-keepers who are anxious to hear how the work of testing the Holy Land or Syrian bees progresses, I will give the result of my experience with them. I have given these bees a pretty careful study during the past season, and I find them possessed of so many remarkable qualities that I shall continue the work of testing them, believing that they will one day be proved a valuable race.

I will speak first of the disposition of these bees. Some attribute them with having a very ferocious disposition, while others speak of them as being equally as mild as the Italians. I wish to add my testimony on the side of the latter, having always found them easy to handle; indeed, with proper care, I can manipulate my Syrian bees at pleasure. I do not doubt but that many have been troubled with what they call pure Syrian bees, but I am inclined to believe that they have a little Cyprian blood in them. I think I have as pure Syrian bees as can be found in the country, and after giving them a long and thorough trial. I find that the two races, although resembling each other in many points, are entirely different as regards their disposition. Although I am not discussing the merits of the Cyprians, I will say here that I have not found them as desirable a race as I expected, chiefly on account of the difficulty in handling them; but I wish to experiment further before I come to any definite decision in regard to them.

My Syrian bees, although not near as docile as my Italians, may be handled with impunity, and I never take any unusual pains in manipulating them; and I do not believe that pure Syrian bees will give any one any trouble in this respect. I am aware that this testimony conflicts with that of many who have tried them, but it is my honest, unprejudiced opinion, formed after a long and thorough test of the bees in question.

The Syrian bees are inclined to build but little drone comb. This will not enhance their value in the eyes of the most of us, but to those who do not use comb foundation it might prove a valuable quality; and foundation has not come into universal use yet, by any means, and many only use it for starters.

Another remarkable point about these bees is, that they seem to be impervious to the attacks of robbers, defending their home with a vigor and energy that is truly surprising. Last season after the honey flow had ceased, and the robbers were on the alert for mischief, I opened a Syrian colony and kept it open until the robbers swarmed around so thick that they almost hid the hive from view, and then closed it and left them to fight the invaders alone, determined to see if it was possible for them to get robbed. Great was my surprise—for I certainly expected to be obliged to interfere in order to save the colony—to see the bees clearing out the hive of robbers, nothing daunted at the invading host; such fighting I never saw on an alighting board of a hive, and it was not long before they had driven the last robber away and were basking in the sun as quietly as before they were disturbed. I opened Syrian colonies after that at all times of day without fear of the robbers, and I have never yet had a colony robbed out, although working on them sometimes until I was driven away. It is handy to have such bees when one is in a hurry and cannot wait for robbers to cool down.

Another remarkable quality about these bees is, that they are very judicious about going out in unsuitable weather. This must recommend them to those who are troubled with spring dwindling, and who have not the time or patience to prevent it. (See BEE JOURNAL for March 9, 1881, page 75). We might infer from this characteristic that the Syrian bees were lacking in ambition, in which case this point would be against them rather than in their favor. I gave some attention to this point last season, and found no reason to form such an opinion, but as I wish to test the matter further, I will leave the question open, as far as I am concerned.

Nearly all who have tested these bees agree that the queens are very prolific, and I can say that such has been my own experience with them; and not only have I found them wonderfully prolific, but very late breeders, a quality which all will appreciate, as furnishing the colony with young, vigorous bees to withstand the long, cold winter.

While, at the present writing, I have every reason to regard the Syrians as a valuable race, I may, after further experimenting with, and studying their habits, discover traits of character which will lead me to change my mind; but of this thing I am certain, that if they prove equal to the Italians in other respects, they will certainly excel as breeders.

Coleraine, Mass.

For the American Bee Journal.

Florida as a Location for Bees.

T. S. ROYS.

Florida, the land of flowers—the land of white sand, swamps, and alligators, would, I think, be equally appropriate. I write these lines sitting in my room with three large windows open and the mercury at 89° in the shade. The busy bees have been at work upon the fragrant orange blossoms beneath my windows for the past three weeks. We have experienced a very warm season in Florida. I landed in the State on Dec. 26 last, and there have been but very few days up to the present when the mercury has ranged lower than 70° F. I noticed an enquiry in the JOURNAL a short time ago from parties who were contemplating coming to this State to reside, relative to its honey resources, etc. My observations have only extended to the peninsular portion of the state, and from what I know of that, would say don't come here to go into the bee business. I am something of a beeasticus myself, and know whereof I speak, and my advice to any and everyone coming to this State with a view to settle, would be to look thoroughly before you leap. Too much cannot be said in its favor as a winter resort or climate, but in almost every other particular it has been terribly exaggerated. Orange culture is the chief pursuit, and I do not know but I might say the only one of any importance, and always will be. Fertilizers are in good demand.

The JOURNAL has been received regularly, notwithstanding my migratory habits. I observe that the great guns are playing away at one another and also at the cause of bee dysentery, diarrhea, etc. These friendly discussions are all very good and are often the vehicles of much valuable information, progress and improvement. But it seems to me that the theories advocated from time to time as to the cause of bee dysentery in winter, or at least the most of them, are so far from being the true cause that I cannot refrain from making a few remarks upon the subject.

In order to bring the said theories before the mind's eye I shall have to enumerate some of them. The first that came under my observation was bacteria as being the cause. This seems to me to be purely imaginary, and entirely without foundation; and I think we had better discard it entirely.

The second cause is pollen. From my observations in wintering bees, pollen is no more the cause of dysentery than propolis. They are both very esential requisites to successful wintering.

The third theory is "breeding in winter." This is a greater mistake than either of the others. The colonies that breed the most, will invariably be the best and strongest on the first day of May; and those that are the strongest at that date, will be the most profitable.

For several winters I conducted a regular system of experiments to discover some means of getting my bees to breed more while in winter quarters. I found they would commence breeding regularly about Jan. 1 to 10, and that they would as regularly stop about Feb. 20 to March 1, and would not recommence until put out of the winter quarters. This abnormal condition is usually the cause of spring dwindling, desertion, etc.

The fourth and last theory that I will enumerate is "starvation." This is about as serious a state of affairs as could possibly exist without coupling any other fatality with it. Bees in a starving condition will sometimes soil the combs with excrement, particularly if in a cold, damp atmosphere, but is never the cause of dysentery in the general meaning of the term. Bees kept in special depositories are apt to be kept too quiet or dormant. This I attribute to a lack of vital air or oxygen, and if the temperature is raised and fresh air admitted they will quickly revive, and resume the low, cheerful hum of happy industry, etc.

Cold is the primary cause of bee dysentery in winter. All of the other causes or conditions as set forth in your valuable paper during the last few months, and not herein enumerated, are secondary in their nature and tend to aggravate the disease, but never produce it. It is always traceable to too low a degree of temperature in some way or form. I have verified the truth of this fact to my entire satisfaction.

I am well aware that since the introduction of the broad, shallow hive, that there has been much serious trouble experienced in wintering bees. In fact it is almost impossible to winter out-of-doors successfully in this form of hive; and those wintered in special depositories, as a general thing, have fared but little better. The former usually perish in the middle of the winter, while the latter are apt to dwindle away and come to naught, soon after being set out.

Jacksonville, Fla., March 23, 1882.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

April 15—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec.

19, 20—Tuscarawas and Muskingum Valley, at Coshocton, O.
J. A. Bucklew, Sec., Clarks, O.

Southeastern Mich., at Jackson, Mich.
J. H. Murdock, Sec., Dexter, Mich.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27,—Western Mich. at Grand Rapids.
W. M. S. Dodge, Sec., Coopersville, Mich.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

May 2, 3 -Eastsrn N. Y. Union, at Cobleskill, N. Y.
C. Quackenbush, Sec., Barnesville, N. Y.

11—Champlain Valley, at Middlebury, Vt.
T. Brookins, Sec., East Shoreham, Vt.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

☞ The Central Michigan Bee-Keepers' Association will meet April 20, at Lansing, in the Capitol building. Programme.—President's annual address, Rev. J. Ashworth; bee hives and fixtures, E. W. Wood; Cyprian bees, J. Harper; the coming bee, Prof. A. J. Cook; care of old combs, Stephen C. Perry.

REV. J. ASHWORTH, *Pres.*

☞ A special meeting of the Western Michigan Bee-Keepers' Association, will be held in Supervisors' Hall, Grand Rapids, Mich., Wednesday and Thursday, April 26 and 27, 1882. WM. M. S. DODGE, *Sec.*

☞ The spring meeting of the Northern Ohio Bee-Keepers' Association will be held at Norwalk, O., on Saturday, April, 15, 1882.

S. F. NEWMAN, *Sec.*

☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. DEMAREE, *Sec.*
Christiansburg, Ky.

☞ The semi-annual meeting of the Tuscarawas and Muskingum Valley Bee-Keepers' Convention, will be held in the Town Hall at Coshocton, O., on April 19 and 20, commencing at 10 a. m. A cordial invitation is extended to bee-keepers everywhere.

J. A. BUCKLEW, *Sec.*, Clarks, O.

☞ The Texas State Bee-Keepers' Convention will hold its meeting at Judge W. H. Andrews' Apiary, at McKinney, Texas, April 25, 1882.

WM. R. HOWARD, *Sec.*

Colorado Farmer.

Bee-Culture in Colorado.

The following is an address read before Loveland Farmer's Institute, Feb. 17, 1882, by Mr. J. McMillan: The subject assigned me on the present occasion is one of importance; second to none investigated at this Institute except water. It is one on which much might be said with profit. For several reasons I shall be brief and will only speak of that part of bee-culture that I think is adapted to the wants of this country. I will examine the subject under three heads: 1st. Will it pay? 2d. Can I succeed in the business? 3d. The management of bees.

As a prelude, we take it for granted that nearly everybody is fond of honey, and would like to have it if they could without too much trouble. Ah, there it is—trouble! Now, I want to tell you at the start, you cannot have as good a thing as honey is without some trouble.

"Will it pay?" is, I presume, an inquiry in the minds of almost every person here to-day. Whether it will pay or not depends entirely upon circumstances. If you get some bees and put them in a hollow log or a square box, leaving them to take care of themselves, being exposed to the ravages of insects and all kinds of weather, it won't pay. You might just as well expect to succeed in farming with the old wooden plow, drag your seed in with a brush, reap your harvest with a hook, thresh your grain out with a flail, clean out the chaff with a sheet, go to mill on a horse, with grain in one end of the sack and a rock in the other, as to expect to make it pay by keeping bees in a hollow log or square box. One of the most essential things in order to make it pay is good stock—strong colonies of pure Italians or hybrids. There is but little difference in their working qualities. I prefer the pure Italians; they are easier managed, and can work on some flowers that the others cannot. When any branch of business pays its way and a net profit equal to the usual rates of interest, it is considered a paying business. I I submit a statement which makes a better showing for the little busy bee than common interest.

The first of last May I bought 2 colonies of Italian bees. When on their stands ready for work, they cost me about as follows:

Two hives (each, $12.00)................	$24 00	
Five new hives	12.50	
Total cost......	$36.50	
By honey, 259 pounds, @ 25 cents.....		$ 64.75
By five swarmings ($12.00 each)......		60.00
Total.............		$124.75
Deduct cost..		36.50
		$ 88.25

The above shows a net profit of about 240 per cent.

The second inquiry by several is, "Can I succeed?"

I take it for granted that what one person has done others may, all things being equal. If you will study the nature of bees, and become acquainted with their habits, and attend to them as you would your horses, cattle or sheep, I can see no reason why you should not succeed.

If our cattle or sheep men would treat their stock like many persons do their bees, they would soon quit the business.

The first and one of the most important things in the management of bees is a good hive. What I mean by a good hive is one that has movable comb frames, convenient in its construction and durable in its make-up. They may differ in form, but those three points every hive should have. It is better for all the hives in the apiary to be alike, so you can divide and change frames from one hive to another. I would recommend dividing for increase, instead of swarming; not so apt to lose bees. But don't go too fast. From three to six times is enough, if you want to keep your bees healthy and strong.

You need a one-and-a-half or two story hive for taking honey, either in boxes or with an extractor. I have not found it profitable to take much honey from the brood chamber. Be sure and leave plenty of honey in the brood chamber, or near it, for winter supply.

Bees should have shade in summer, and comfortable quarters in winter. I do not think anything more is needed here in winter than a tight board house, with an opening for bees to pass out when they want to. But be sure and keep the snow and ice out of the lower part of the hives, so the bees will not smother.

Last, but not least, in the management of bees, is bee pasture. Nature has furnished this country with some of the finest honey plants I have ever got acquainted with. The two most prominent I have noticed in the past season, was the cleoma and the coreopsis. There is quite a variety of honey plants that may be grown here successfully, if farmers and gardeners would scatter the seed where there is moisture. White clover and mignonette would grow here in many places if the seed were sown, but the natural resources for honey will not be exhausted for some time to come. A majority of the native flowers furnish honey or pollen, besides many trees. Every acre of land brought under cultivation adds resources to bee range. There is no necessity for California or Utah honey being brought here to supply our markets when we have plenty right at our doors, if we will only gather it in. Within a radius of five miles from the center of Loveland, during the past season, there was ten thousand dollars' worth of honey lost for want of bees to gather it, and of a quality that will compare favorably with the honey of any country.

Mr. Washburn: How do you divide a colony?

Mr. McMillan: I would make a new colony about the 1st of May, though much depends on circumstances and season. Some years I can divide more than others, as, for instance, last year, I commenced earlier and divided oftener. Whenever drones begin to make their appearance I divide. Some say to wait until queen cells are formed, but you can divide sooner. I have two ways of dividing. 1st. Take half the frames from a well filled hive and place in an empty one. Might take more than half. 2d. Take one frame each from eight hives and place in new hive. Let them alone and they will rear a queen. Both plans are successful. Don't divide your bees too much. I did mine the first year and by fall had a big showing, but in the spring I could not brag a bit.

Mr. Washburn: In the second method, does it make any difference what frames you take?

Mr. McMillan: Yes; do not take outside frames, for they are not as sure to contain enough young bees, larvæ and eggs as those nearer the center.

Mr. Sprague: Can bees be reared with success 8,000 feet above sea level?

Mr. McMillan: As a rule, whereever flowers bloom and seeds mature, bees can exist. The only difficulty would be in winter. I think bees could exist in the mountains.

Mr. Hollowell: Will bees remain in the new hive? Won't they go back?

Mr. McMillan: They will stay. In moving frames from one hive to another a number of old bees will be moved to new hives. These bees will, for the most part, stay with the hive and care for the younger ones.

Mr. Cole: Price of your hive?

Mr. McMillan: About $3.50, painted and in good shape. Some say that bees are neat and prefer nicely painted hives to any other—will do much better there. But paint your hives, at any rate; they will last longer.

Mr. Hinman: What is the length of life of a worker bee?

Mr. McMillan: Cannot give this from my own observation. But they live 25 to 30 days. After a bee leaves the hive and goes to work it soon works itself out.

Mr. Hinman: Must not bees kept over winter have a place to breed? Would not the swarm otherwise cease to exist?

Mr. McMillan: There is such a thing as their raising young bees during the winter; but bees go into a certain state and live longer in that state than under ordinary circumstances. It is best not to meddle with them in the fall. Let them fill their hives with honey in the fall, and they will come out all right in the spring. I tried taking part of the honey away from some of my bees one fall and left the rest as they had provided for winter. Those I made room for came out in bad shape in the spring. You can be too anxious with your bees. Give your bees a chance and they will succeed.

☞ The Champlain Valley Bee-Keepers' Association will hold their semi-annual meeting at Middlebury, Vt., May 11, 1882. T. Brookins, *Sec.*

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

SELECTIONS FROM OUR LETTER BOX

Wistaria Blossoms.—Herewith you will find some blossoms of the wistaria, which has been in bloom for some time. It is a rapid climber, and looks so beautiful, and seems to give my bees so much pleasure, I cannot resist the temptation to send you a couple of clusters. We have the finest prospect for a good honey yield that we have ever had, I think.

JAMES A. AUSTIN.
Huntsville, Ala., March 31, 1882.

[The flowers are very pretty, and nothing is more attractive than a wistaria vine in full bloom.—ED.]

The Hive I Use.—I have had considerable experience in bee-keeping, and have tried quite a number of different hives, but was not suited with them. I have gotten up a hive of my own—a double-wall, sawdust hive. My smallest hive measures inside 20x14 inches, by 14 deep. The frames are 13½ inches outside, both ways, and 12½ inside, making it a square frame, and will hold 9 of the small section boxes. These hives are nailed on strips of scantling 22 or 24 inches long, 2x2½, forming the hollow wall for sawdust, and extending down for legs to stand on, allowing the air to pass underneath the hive to prevent all dampness. I have some of those hives 40 inches long, with two entrances, intended for two colonies, with partition between. In some of these I have single colonies filling up the whole space. I find I receive the most profit from these strong colonies. I have frequently wintered these on 18 combs. I use a honey-board over my frames, leaving ⅜ of an inch between the board and frames. My hives all have doors at each end, so by using a glass instead of a partition board, I can at any time see how they are coming on. The honey-board has a square piece to lift out of the center, 5x8 inches. Over this I put a piece of canvas, and then cover over all with sawdust. The bottom of the hive is hollow and filled the same as the sides. The ends between the doors and bees I have not filled in the summer time, on account of the observing glass.

Benmiller, Ont. P. FISHER.

Notes from Nebraska.—For some time past we have had a succession of small hurricanes of about the second magnitude, in this locality. On last Saturday the wind blew a furious gale from the southwest, and to-day (Monday) it has been repeated again with redoubled violence, filling the air with a cloud of dust and dirt, and doing considerable damage to fall breaking, drifting it in places like snow. It is very dry here now, and a good rain would be welcomed by all. The peach trees are in bloom nicely, and the cherries and plums will soon be out with their robes of white; but the industrious little bee has to keep close at home these windy days. I am just beginning with bees—have three colonies which I bought this spring at $6 per colony. They are in the improved champion hive, and are in good condition at present. I am a subscriber for the BEE JOURNAL, hence I come to its columns for information. The bees glue some of the frames to the lid of the hive, and in removing it they sometimes fall an inch or more, causing quite a commotion among them, now how can this trouble be righted? W. H. MARTIN.

Falls City, Neb., April 3, 1882.

[Use a cotton or woolen blanket on top the frames, and clean the lid of the hive free from wax, so there will be none to stick it fast to the blanket. There should be just ⅜ of an inch space between the top bars of the frames and the lid, if you use no blanket, and the bees will not be so apt to bridge between.—ED.]

Dollar Queens Again.—In discussing a subject of such vital importance to the bee-keepers of our country, I was in hopes that the truth would shine brighter than the almighty dollar. In natural swarming I never saw more than 5 queen cells designed by the worker bees to become perfect mothers; 3 is the rule. All the rest are inferior, and the queen-breeder that does not know this, does not know how to do it. How often do we hear the queen-breeder boast that he can get 20 to 30 fine queen cells built in one nucleus? I suppose such breeders must know how to do it, for they often remove the cells from the nucleus, and graft in more larvæ for another batch, in which case rarely more than one cell receives attention enough to become more than half queen and half worker.

A MICHIGAN BREEDER.

What Shall I do with Them.—I have two colonies in movable frame hives, started without foundation. The bees have built the combs every way except straight with the frames. What shall I do with them? My bees brought in pollen yesterday, for the first time this season.

H. J. NORTHRUP.
Lansingburgh, N. Y., April 4, 1882.

[Artificially swarm them on good foundation, as described on page 210, of last week's BEE JOURNAL, 3d paragraph, 3d column, as soon as fruit is in bloom. Then trim out and save what brood you can.—ED.]

First Swarm Reported.—Had the first swarm for the season to-day—full Italians, and the largest I think I ever saw. Bees are beginning well. The hives are full of honey from fruit bloom, and I am extracting to make room for the queens. My 30 colonies are just as strong as they well can be. The prospect now is certainly encouraging. F. N. WILDER.

Forsyth, Ga., March 25, 1882.

Net Weight.—Is it customary to include the weight of the can with the honey—that is, 10 lbs. or less, as the case may be, to weigh 10 lbs. honey and all, at so much per lb.; or is the tin deducted as tare? Please answer in the BEE JOURNAL.

Tiverton, Ont. A SUBSCRIBER

[We do not know what practice prevails, where tin cans are not labeled, but would imagine, if we bought from a reliable dealer, he would give us 10 lbs. net weight, if we inquired for 10 lbs. of honey. When labeled, the label generally states the net weight of contents, and the can or pail is charged for extra, or an addition made to price of honey to cover the cost of the tin. In selling comb honey, the section box is charged in the weight of honey, because it saves to the purchaser its cost in dripping and waste honey, which would otherwise occur if the comb was cut to accommodate with a small amount.—ED.]

At Last We Agree.—I must thank Mr. Briggs for his manly and public confession of the soundness of my bacteria-pollen theories, as given in the BEE JOURNAL of March 29, page 198, wherein he says, "if pollen or honey is fermented or turned sour (bacterious), then it becomes unnatural, and, consequently unhealthy;" and also, for stating in regard to excessive pollen-eating when confined, "this insufficient and unnatural food produces enormous distension of the abdomen, and diarrhea; and all these causes resulted in death." That is just what I said. We are now pretty well agreed, only I must say that the experience of the most skillful hardly warrants me, the champion of Mr. Briggs' opinions, in believing that already the problem of "wintering bees is as simple as wintering stock of any other kind." I have enjoyed Mr. Briggs' attempts at some of the smart hits that Mr. Clarke speaks of. JAMES HEDDON.

Dowagiac, Mich.

Bees in Massachusetts.—March 28th being a nice day, with mercury at 55° in the shade, I thought I would look at my bees—25 colonies. They are all in nice shape, with plenty of bees and stores; were bringing in natural pollen at that date for the first time. That is just 3 days earlier than last year. I have been watching them close every warm day to see which colony brought in pollen first, but, to my surprise, I found every colony commenced the same day. I send you a blossom of spider plant, to show we can have them quite early here. But we have had it growing in the house all winter. D. S. BASSETT.

Farnumsville, Mass.

Bringing in Pollen.—My bees are bringing in natural pollen to-day—15 days earlier than they did last year.

W. C. GILLETTE.
Le Roy, N. Y., April 3, 1882.

Paint for Hives.—I prepared for winter 82 colonies; all of them are now living and very populous. Have drones flying, and some colonies seem to work almost as busy as though it were June, and right in the honey season. They are working on willows and maples. I have about 100 hives that ought to be painted; can you give me a formula of cheap paint that would answer the purpose, and still be durable. J. RUDY ROEBUCK.

Burton City, O.

[If you wish to paint them white, nothing is better than white lead and boiled linseed oil. If you mix it yourself, the cost will be about 8 cents per pound. For a yellow, beryl yellow and boiled linseed oil, will be durable; cost 7 to 7¾ cents per pound. Dark brown. use what painters call Ohio mineral and boiled linseed oil; cost 7½ cents per pound. Reddish brown, Wisconsin mineral and boiled linseed oil; cost 7¼ to 7¾ cents per pound. Exercise your own judgment in mixing to have it spread to advantage. These will all make durable paints, and one coat, well put on, will be sufficient. Of course the quantity used per hive will depend upon their age, smoothness, and kind of material. —ED.]

Bees in Minnesota.—Bees in this part of Minnesota have wintered finely. I have 98 colonies out of 103 last fall, not one moldy comb to be found. My bees are breeding very fast and appear to be in the best condition that I ever had bees at this time of the year. There are 2 colonies of Cyprians here in this village, which I have been watching with interest, to see if they were in any way superior to the Italians, which I have failed to see, only in disposition. They are not as light in color as the Italians or as large, but can put in more sharp points to the square inch in a minute than any hybrid that I ever saw. I think disposition might be improved by crossing with good Italians. Taking them all around, they have a better disposition for sting than either blacks or Italians. The prospects are good for a good honey season, plenty of clover making its appearance. WM. LOSSING.

Hokah, Minn., April 6, 1882.

A Floral City.—My bees have done well. I wintered them in the cellar and lost none. They are now busily at work on the flowers. Mr. Editor, it would do you good to go upon the tower of our court house and look over the city. It is a perfect flower garden. JONATHAN GEORGE.

Independence, Mo., April 3, 1882.

Bees Healthy.—My bees are in good condition; they have wintered nicely and appear to be healthy.

JOEL BREWER.

Lincolnville, Ind., April 1, 1882.

Last Year's Record.—Last spring I started with 5 colonies in fair condition. On the second day of February I took them from the cellar, putting them on the summer stand. The day was very warm, and they took a good airing. That night became cold, the next day colder, until 16° below zero was reached. Meantime I covered them with hay, and kept them there till the last week in March, when I uncovered them, and they came out as bright and merry as May birds. They increased in strength faster than I ever had bees increase before. By the first of may the hives were full and running over with bees. I increased to 23; sold 1; in the fall united 2, and 1 left for distant parts. I put 20 into winter quarters—13 in fair condition, and 7 rather light. The spring season was good for honey till the middle of May or 1st of June, when the drouth commenced. This made things dark and discouraging. During July and August they ate more than they gathered. September and October they obtained enough to stimulate to breeding. My surplus was light. I took 50 lbs., worth 25c. I estimate my profits for the season at $128.80, on honey, increase and sales.

ROBERT CORBETT.

Manhattan, Kan.

Early Drones.—I find that the drones are flying to-day from three colonies of bees. These are the first I have heard of in this section. Is it not early for this latitude?

JAMES S. LORD.

Linden, N. Y., March 27, 1882.

[Yes; but everything is earlier this spring, than common.—ED.]

Roaches in Hives.—I have bought 4 colonies of bees this spring, one in an old-fashioned gum hive. I can hear the bees, but very few come out, not even in warm days. I find a number of roaches in all the hives. Would like to know if they are injurious in any way whatever to the bees? I have not seen an article on this subject in the BEE JOURNAL.

O. PARKER BAKER.

Woodberry, Md.

[We recently saw a car-load of bees which had been just brought from the South. There were hundreds of roaches about some of the hives, but as the bees were very numerous, we can hardly believe the roaches could have been injurious, unless, indeed, they had eaten some of the honey, of which there was a great abundance left.—ED.]

Gathering Pollen March 1st.—My bees brought in pollen March 1st. I tried two ways of wintering on the summer stand—one-half packed, and the remainder without packing, and the latter came through much better for two winters in succession. Some years ago I buried my bees, on the Langstroth plan, and they came out all right. WM. ROBERTS.

Vaughansville, O.

Extracting Before Swarming.—My pets are doing well, and are very busy carrying in honey and pollen. Is it advisable to extract the honey before swarming, as they have between 40 and 50 lbs. to the colony?

Racine, Wis. F. A. GIBSON.

[Yes; if you want to run for honey, as that quantity now in the hives will greatly deter brood-rearing, and will force swarming or idleness.—ED.]

Honey from Asters.—Our bees are doing finely—yes, boomingly. Saw drones, plenty of them, on the 15th inst.—more than 6 weeks ahead of last year. Have not lost a colony this winter, all 23 are in fine condition. If the weather continues propitious, will have early swarms and a sweet time this season. The aster saved our bees last fall; if it had not been for this little giant all of our pets would have starved. It was the only thing that withstood the fearful drouth of last summer. J. A. BURROW, M. D.

Santa Fe, Tenn., March 28, 1882.

Doing Finely.—Bees seem to be doing very finely; indeed, they were never in better condition at this time of year, that is, judging from those out-of-doors; those in the cellar are very quiet. We keep the door and 3 windows open both night and day, shaded so as to break off the rays of light, most of the time, except bright days, when we close them 5 or 6 hours in the middle of the day. The chaff packing keeps them warm and dry, so the cellar can be thoroughly ventilated. L. C. AXTELL.

Rosedale, Ill.

Editorial Items.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. This is a new pamphlet of 32 pages which we have just published. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance :

For 4	weeks		10	per cent.	discount.
" 8	"		20	"	"
" 13	"	(3 months)	30	"	"
" 26	"	(6 months)	40	"	"
" 39	"	(9 months)	50	"	"
" 52	"	(1 year)	60	"	"

Discount, for **1** year, in the MONTHLY alone, **25** per cent., **6** months, **10** per cent., **3** months, **5** per cent.

Discount, for **1** year, in the SEMI-MONTHLY alone, **40** per cent., **6** months, **20** per cent., **3** months, **10** per cent.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
974 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

"How do You Manage," said a lady to her friend, "to appear so happy all the time?" "I always have Parker's Ginger Tonic handy," was the reply, "and thus keep myself and family in good health. When I am well I always feel good natured." See other column. 11w5t

The Apiary Register.

As the time is now at hand to commence the use of this valuable book, all who intend to be systematic in their work during the coming season, should obtain a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75.

◆

☞ To any one sending two *new* Weekly subscribers for a year, we will present a volume of the BEE JOURNAL for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our *new* subscribers will be pleased to learn that they can get it for $1.00, by sending for it *at once*, before they are all gone.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

☞ We have received from Dr. A. B. Mason, of Wagon Works, Toledo, O., a circular of the Tri-State Fair to be held in Toledo, O., Sept. 11-16, 1882.

◆

To Promote a Vigorous Growth of the hair, use Parker's Hair Balsam. It restores the youthful color to gray hair, removes dandruff, and cures itching of the scalp. 11w5t

◆

☞ The Southeastern Michigan Bee-Keepers' Association will meet at Jackson, Mich., in the City Council Hall, April 20, 1882, by order of the President. All bee-keepers are invited to attend; let there be a good turn-out.
J. H. MURDOCK, *Sec.*, Dexter, Mich.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 10, 1882.

The following are the latest quotations for honey and beeswax received up to this hour :

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 8c. for dark and 10c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax, on arrival; 18@22c. for medium grade, and 15@17c, for dark.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

HONEY—The demand for comb honey is slow, and prices nominal at 16@20c. on arrival. Extracted honey is in fair demand. Our jobbing prices for 1 lb. jars of clover honey are, per gross, $25; for 2 lb. do., per gross, $42. The demand for manufacturing purposes is very good. We pay 8@10c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb honey is very scarce and commands 22@25c. per pound. Other grades, partly dark and dark are very slow sale. Extracted firm at 9@12c., according to quality and style of package.

R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—There is a liberal supply of honey here for which trade is very little demand, and prices rule weak and irregular.

We quote as follows: White comb, in small boxes, 18@19c; dark, in small boxes, 12@14c. Extracted, white, 10@11c.; dark, 7@9c.

BEESWAX.—Prime quality, 21@23c.

THORN & CO., 11 and 13 Devoe avenue.

SAN FRANCISCO.

HONEY—Market is very quiet. Extracted, light amber-colored, is offering at 9c., and comb of very good quality at 16c. A new disease among bees is reported to be doing considerable damage in San Diego county. Several apiarists are said to have lost heavily on account of the same. Reports as a rule, however, are very favorable. Quotations on extra white, both comb and extracted, are nominal, as there is none offering.

We quote white comb, 16c.; dark to good, 10@14c. Extracted, choice to extra white, 8@10c.; dark and candied, 7c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—Strained dull, at 8@9c.; no comb here to speak of—worth 18@22c.

BEESWAX—Stiff at 20@21c. for prime.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—The market remains unchanged: 1 and 2 lb. sections of No. 1 white are in regular and quick demand at 21@22c. No. 2 white has dragged a little of late, but took a lively start to-day at 20c. cleaning out all stock on hand. Buckwheat no sale. Extracted is quite active at 12c. for small and 11c. for large packages.

BEESWAX—25@30c.

A. C. KENDEL, 115 Ontario Street.

◆

☞ The Bee-Keepers of Virginia and Maryland are invited to meet at the Court House in Hagerstown, Md., on April 20, at 11 a. m., to organize an association. D. A. PIKE.

◆

For man it has no equal; for beasts it is not excelled. What? Kendall's Spavin Cure. 14w4t

STANLEY'S NOTICE.

On account of the advance in Beeswax, we shall be obliged to make a **SLIGHT ADVANCE** in the price of our Foundation **after April 20th.** Until that time prices will remain unchanged.

G. W. STANLEY & BRO., Wyoming, N.Y
15w1t

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

Italian Bees for Sale.

I have for sale about 40 Colonies in 10 frame Langstroth hives. All are in prime condition, and have young queens. Will be delivered after April 20th. Price, for Italians, $9 ; a few good Hybrids, $1 less. Satisfaction guaranteed.

15w4t **JOHN F. DIPMAN** Fremont, Ohio.

QUEENS--QUEENS

Circulars free. Address,

15w6m **JOS. M. BROOKS**, Columbus, Ind.

Full Colonies of Italian Bees,

in the Langstroth frame, shipped in ONE-STORY SIMPLICITY HIVES, at $7 each.

15w4t **R. I. BARBER**, Bloomington, Ill.

TIN POINTS for GLASSING HONEY

Cut by machinery ; are much cheaper than hand-cut, and perfectly straight ; 2,000 to 5,000, 25c. per 1,000 ; 6,000 to 10,000, 22c. ; over 10,000, 20c. Send 30c. for sample thousand free by mail.

W. C. GILLETTE,
15wtf LeRoy, Genesee Co., N. Y.

INQUIRIES

CONCERNING

THE CLIMATE,

Mines, Manufactories and Commerce

OF

COLORADO,

will be promptly and truthfully answered by private letter, upon sending One Dollar to the

Woman's Industrial Association,

15w6m 291 Sixteenth St., **DENVER, COL.**

PRIZE QUEENS FOR 1882,

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates : Tested Queens, $3 ; Warranted Queens, $2 ; Queens without guarantee, $1 ; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

Two Apiaries for Sale.

Having purchased the Apiaries of A. T. Williams, in which I was a partner. I now offer them for sale. These apiaries are now divided, one portion of 150 colonies, are in Illinois, about 50 miles from St. Louis, Mo., and the remaining 250 colonies about 6 miles from New Orleans, La. Both Apiaries are in good honey locations, and the bees are in fine order. The Apiaries are well stocked with supplies of all kinds, with 100 new hives made of cypress lumber, and ready for bees when they swarm. The bees are all

CYPRIANS AND ITALIANS.

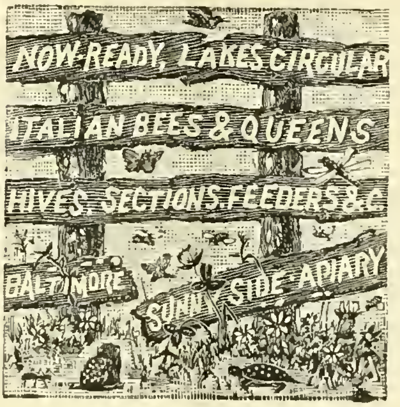
All the hives are the Improved Quinby, and thoroughly painted. The bees here were brought last fall. My reason for selling : Engaged in other business and cannot attend to them.

I will take for them $6.50 per colony net for all of them, or will sell in lots to suit purchasers for $8 net. I have on hand two honey houses, one foot-power saw, two honey extractors, all kinds of tools for apiarian work, 16,000 sections (one-piece), 125 lbs. foundation, and all the hives supplied with section cases all tinned.

This is **AN EXTRA BARGAIN** for a party or parties to invest in an enterprise of this kind.

JOHN ENOCH,

15w4t **Gretna P. O., La.**



BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **24c.** per pound, delivered here, Cash on arrival. Shipments solicted.

ALFRED H. NEWMAN,
972 West Madison Street, CHICAGO, ILL

Bees and Queens a Specialty.

I have a choice lot of Tested Italian Queens, also Full Colonies of Bees, I offer for sale cheap. I shall breed and have for sale after June 1st, young Queens from the best of Imported stock. Satisfaction guaranteed. Price list free.

11w5m **I. S. CROWFOOT**, Hartford, Wis.

65 *ENGRAVINGS*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms ; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison ; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse ; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
974 West Madison Street, CHICAGO, ILL.

Sweet Clover Seed Wanted.

I wish to purchase several bushels of Sweet Clover (*Melilotus alba*) Seed. Address, stating quantity and price. **A. H. NEWMAN,**
12wtf 972 W. Madison Street, Chicago, Ill.

FOR SALE—150 Colonies of Italian Bees in improved Quinby hives, in prime condition.
39w1y L. C. AXTELL, Roseville, Warren Co., Ill.

BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including the CONQUEROR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
972 W. Madison, CHICAGO, ILL.

DUNHAM COMB FOUNDATION—**35c.** per pound ; extra thin and bright, 10 sq. ft. to the lb., 45c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13w1y

FREE! FREE!

Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.

11wtf E. A. THOMAS & CO., Coleraine, Mass.

THE LATEST and THE BEST.

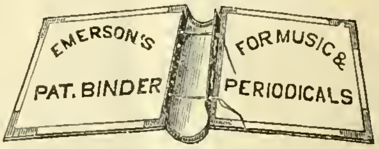
The Excelsior Cold-Blast Smoker sent to any address, postpaid, on receipt of $1.00.

14w2tp W. C. R. KEMP, Orleans, Orange Co., Ind.

BIND YOUR JOURNALS

AND KEEP THEM

NEAT AND CLEAN.



The Emerson Binder

IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Bee Journal of 1880................**50c.**
For Bee Journal of 1881................**85c.**
For Bee Journal of 1882................**75c.**

Address, **THOMAS G. NEWMAN,**
974 West Madison Street, **Chicago, Ill.**

NARMORE & WOOD,

NORTH LANSING, MICH.,

Manufacturers of

Bee Hives, All-in-one-piece Section Boxes,

FANNING MILLS, SASH, DOORS & BLINDS.

13w13t Italian Bees for sale.

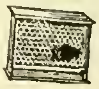
THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
13wtf Abronia, Mich.

FLAT - BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

KNOW THYSELF. **GOLD MEDAL** Awarded the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self-Preservation ;" bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only $1.25 sent by mail ; illustrated sample, 6c ; send now. Address Peabody Medical Institute or Dr. W. H. PARKER, No. 4 Bulfinch st., Boston. 22w1y

ITALIAN BEES AND QUEENS.

Full Colonies, Nuclei, Tested and Untested Italian Queens, bees by the pound. I guarantee safe arrival. Address, **OTTO KLEINOW.**
13wtf Opposite Fort Wayne, Detroit, Mich.

Florida Land--640 Acres

☞ CHEAP FOR CASH. ☜

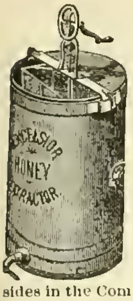
DESCRIPTION,—Sec. 4, township 7, south range 7 west, Franklin county, Florida, situated about 50 miles south of the Georgia line, 25 miles west of the city of Tallahasse, the capital of the State, and about 25 miles northeast of the city of Apalachicola, a seaport on the Gulf of Mexico, and within 2 sections (5 and 6) of the Apalachicola river ; the soil is a rich, sandy loam, covered with timber.

It was conveyed on Dec. 31st, 1875, by Col. Alexander McDonald, who owned 6 sections, including the above, to J. M. Murphy, for $3,200, and on Sept. 5th, 1877, by him conveyed to the undersigned for $3,000. The title is perfect, and it is unincumbered, as shown by an abstract from the Records of the county, duly attested by the County Clerk ; the taxes are all paid and the receipts are in my possession.

I will sell the above at a bargain for cash, or trade for a small farm, or other desirable property. An offer for it is respectfully solicited. Address,

THOMAS G. NEWMAN,
974 West Madison Street, CHICAGO, ILL.

EXCELSIOR
HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets.

For 2 American frames,	13x13	inches	$8 00
For 2 Langstroth "	10x18	"	8 00
For 3 " "	10x18	"	10 00
For 4 " "	10x18	"	14 00
For 2 frames of any size,	13x20	"	12 00
For 3 " "	12½x20	"	12 00
For 4 " "	13x20	"	16 00

ALFRED H. NEWMAN,
972 West Madison Street, Chicago, Ill.

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
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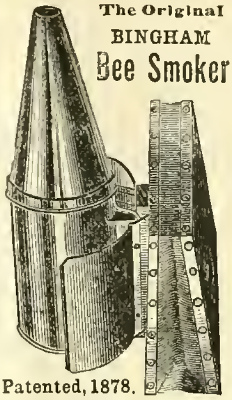

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—:o:—

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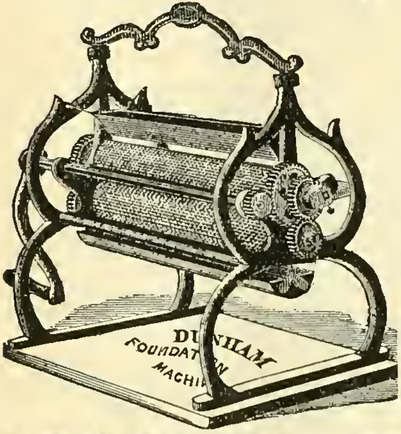

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items 241, 242
Cold Weather and Frosts 241
Small Money Orders.......................... 241
Selling Bees 241
Pure Races of Bees........................... 242
Clubbing List 242
Blunderers in High Places................. 243

Among Our Exchanges—

Paying Your Money but Not Having Your Choice.. 243
A Standard Frame............................ 243
Bees as Weather Prophets.................. 244
Adulteration Frauds 244
Be Kind to the Bees........................... 244
Buying Bees and Transferring............ 244
Preparation of Honey for the Market 244

Correspondence—

Storing Honey in Sections.................. 245
Some More Slovenly Bee-Keeping......... 245
About Bee-Keeping in Colorado........... 245
The Bee Controversy.......................... 246
Northwestern Iowa and Southeastern Dakota... 246
Improvement in Bees, etc.................... 247
Notes from Washington Territory......... 247
Anomalous Cases of Success............... 247

Convention Notes—

Local Convention Directory................ 248
Barren County, Ky., Convention........... 248

Selections from Our Letter Box—

Narrow-Top Sections 249
Laurel Honey Poisonous 249
But One Nucleus Colony Dead.............) 249
For Honey as well as Ornament..... 249
Introducing Queens 249
High Water's Ravages 249
Better Prospects 249
Gathered Some Honey......................... 249
Wintered Well................................... 250
Several Points 250
Honey Resources of Texas..... 250
"Out of the Woods".............................. 250
An Early Swarm................................. 250
Bee Moths 250
More About Albinos............................ 250
Standard Langstroth Frame 251
The Langstroth Hive........................... 251
Doing Splendidly in Florida 251
When and How to Clip Queen's Wing..... 251
Preparing to Swarm 251
Safely Through the Winter 251
Honey Prospects in California............. 251
Gathering Pollen................................ 251
Fruit in Bloom in Kansas 252
As Strong as Last Fall......................... 252
In and Out-Door Wintering.................. 252

Cold Weather and Frosts.

Since the last issue of the BEE JOURNAL, the weather has been quite cold and unpropitious for bee-keeping, and the encouraging outlook has in some localities been somewhat checked. Through the Central States frosts have prevailed to a considerable extent, to the great detriment of the fruit crop, and in some localities early fruits and vegetables have suffered to a considerable extent. Hon. G. W. Demaree writes us from Kentucky, under date of April 13, as follows:

> The cold wave struck us on last Monday; temperature went down to 30°; thin ice formed Monday and Tuesday nights; fruit all killed, and much other damage done—it is like "death in the midst of life." The orchards and trees look like they had been scorched with fire. It is feared that the growing wheat crop will be shortened by reason of the freeze. Some fields were nearly ready to head out. We can only hope for the best. Our bees are flying to-day, but they evidently realize the loss of the most profuse bloom ever seen about here.

In the vicinity of Chicago, several days of cold, wet weather were followed with heavy white frosts on last Saturday, Sunday, and Monday mornings, with cold west winds and clearing weather. The few sources of honey flow have been temporarily checked, pollen gathering ceased, and in colonies where brood-rearing had commenced, the consumption of honey and dwindling has been almost unprecedented. Every bee-keeper should see to it that the bees have feed in abundance, and provide it where wanted. We do not think the general prospect for a honey crop is diminished, except, perhaps, where hopes were entertained regarding the fruit bloom giving a surplus.

Advices from Continental Europe, as late as April 10 report cold weather and hard frosts in the valley of the Danube. Fruit trees, vines, and young wheat in Roumania are almost entirely destroyed.

◆

Small Money Orders.—The post-office committee of Congress has agreed upon a bill providing for sending small sums of money by mail. The charge is 4 cents for any sum under $5, and will be very convenient to those sending small sums to newspapers or for supplies. The order is made payable to bearer at some particular office, which avoids the necessity for the duplication and identification necessary for the larger orders. The card is to be punched on the margin, which has figures showing the various amounts in dollars, dimes, and cents which can be transmitted. It will, no doubt, be very similar to the new orders of the Express Co's.

◆

Catalogues.—We acknowledge the receipt of apiarian catalogues from S. Valentine, Double Pipe Creek, Md.; George W. Baker, Lewisville, Ind.; Rev. J. S. Woodburn, Livermore, Pa., and S. D. McLean, Columbia, Tenn.

◆

Selling Bees.—The demand for bees this spring is very large. Mr. Richardson, of Canada, remarks as follows: "I successfully wintered 25 colonies and have since sold all of them but 5 colonies, and could sell 100 more had I them for sale." Those having bees to dispose of should advertise them at once, so that those wanting them will know where to apply for them.

Pure Races of Bees.

Mr. Frank Benton, wrote the following letter, from the Mount Lebanon Apiary, Beyrout, Syria, dated March 6, 1882, to the editor of the *British Bee Journal*, to correct an editorial statement in the February number of that paper:

In the *British Bee Journal*, for February, page 214, I find in the "Reply to Query No. 443," signed "Ed.," the following statements, which are such as to demand a word of correction from me:

"It was claimed by Messrs. Jones and Benton that the Cyprian and Syrian bees were distinct in character, and they immediately set to work to breed both races in the Cyprians' apiary; and the Italian breeders have been doing worse by breeding Cyprians and Syrians in their Ligurian apiaries, so that eventually it will be difficult to find or keep a pure race at all."

True, Mr. Jones as well as myself, think the Cyprian and Syrian bee sufficiently "distinct in character" to merit different names. But the next statement can best be answered by a brief account of the work undertaken by Mr. Jones and myself. We came to Cyprus together in March, 1880, and immediately established an apiary in Larnaca. While purchasing colonies in Cyprus and rearing queens in the apiary at Larnaca, Mr. Jones went to Syria and obtained a number of colonies of Syrian bees, also from Palestine a number of colonies were obtained. These were brought to Cyprus and transferred at once from the clay cylinders into frame hives. The drones were destroyed in order to prevent the mis-mating of young Cyprian queens; and, in order to ascertain what effect crossing Syrian queens with Cyprian drones (the handsomest of all drones) would have, a few Syrian and a few Palestine queens were hatched in the apiary at Larnaca. Then Mr. Jones started on his homeward journey, taking with him every Syrian queen and every Palestine queen which he had brought to Cyprus, and also all queens reared from those mothers.

After that a few daughters of the original imported Syrian queens were permitted to hatch, and were sent out by me as Syrian queens fertilized by Cyprian drones, but none of these were sent to England or to Italy, except a single one sent to the editor of the *British Bee Journal*, and mentioned on page 45, of July number, 1880. All colonies having been supplied with queen cells from Cyprian mothers, and the hatching of Syrian and Palestine drones having been prevented, it will readily be seen that there was not after that time a drop of Syrian or Palestine blood in the apiary, except, of course, the few worker bees, the progeny of the queens sent away.

The past season also I obtained a few colonies from the mainland, and, after sending the queens away, batched a few daughters from their brood, so as to produce a cross between Syrian queens and Cyprian drones, and all the latter were sent to Mr. Jones, in Canada, for purposes of experiment. Thus, at the present time there are no bees in Cyprus that contain the least taint of any foreign blood, nor has there in fact any admixture of races taken place. Furthermore, as the statement above quoted brings in question the quality of queens sent out by me, I have only to say that every queen sent out as a Cyprian queen is bred in Cyprus; every one sent out as a Syrian is bred in Syria; and every Palestine queen comes from Palestine, and at least in this part of the world, if not in other parts, there exists not the least chance of an intermixture of the races.

It is true that the Italian queen breeders have been getting Cyprian bees. This they have done in the belief that the latter would improve their own bees, and if they continue in this direction they are not likely to be disappointed, for the bees of Cyprus, as well as those of Syria, possess an animal vigor and power of transmitting their qualities to their offspring with other bees, not found among Italian bees.

Speaking of crossing Cyprian and Italian bees, Count Gaetano Barbo, President of the National Society for the Encouragement of Bee-Culture in Italy, and one of the highest authorities in that country on bee matters, recently wrote: "I am convinced that the crossing of Cyprian drones with Italian queens will give good results."

Professor Sartori, of Milan, another of Italy's first authorities in bee-culture, it was who imported the first Cyprian bees into Italy, and since then other prominent queen breeders there have obtained them. I have sent a number of consignments direct from Cyprus there, but have sent no Syrian as yet, nor do I think any of this last race have gone there alive.

I have good reason to believe that all the Syrian and Palestine bees thus far landed in Italy were collected in alcohol by an Italian queen breeder, who then wrote some columns for publication, in order to tell of his wonderful exploit in capturing them!

In closing I would like to mention still another point which may not be generally known in England, as I am sure it is not in America, namely, the fact that black bees exist in Italy. Of this I can adduce many authorities, and from the Italian bee journals themselves, as witnesses. Thus I do not believe the introduction of Cyprian bees there will make things any worse, but it is quite possible an improvement may be effected in the bees of Italy.

We had supposed it to be pretty generally known in America that there are, or have been, black bees in Italy. The testimony on this point is not only direct, but many of the bees brought from there are more or less corroborative on this point, unless it be admitted that the Italian bees themselves are a mixed or non-distinctive race; and perhaps both views of the case are correct, as Count Barbo has asserted that Italian bees have been bred there with the peculiar markings of the Cyprians. Queens have been imported from there which produced hybrid bees, and it is notorious that neither the queens nor the bees there are uniform in themselves, or among their progeny. Yet we do know that superior bees have been bred in America from the imported Italians, either direct or through discriminating selection.

The proof is positive, however, that black bees do exist in Italy. Mr. D. A. Jones asserted publicly and positively he had seen black bees in the vicinity of Rome itself; Mr. Frank Benton says they exist in Italy, and we stated in the National Convention, at its session in Chicago, that we had seen hybrids there. Other evidence can also be adduced to the same effect.

* * *

☞ Mr. W. D. Wright, Knowersville, N. Y., writes us as follows, on April 13, 1882: "The Rev. Jasper Hazen died at his home in Woodstock, Vt., on the 30th ult., aged 92 years. The older readers of the BEE JOURNAL will remember him as a frequent correspondent in the earlier volumes. The deceased formerly lived in Albany, N. Y., where he was much respected and esteemed."

* * *

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Blunderers in High Places.

The *Indiana Farmer*, of recent date, has the following article, which will be read with interest not unmingled with contempt, by all honey producers in this country:

> Gov. Porter, in his address at Columbus, before the Farmers' Institute, said in reference to glucose, that it is converted into a choice syrup that is extensively used as a table syrup, and exceedingly attractive in appearance. In its taste it resembles more than any other sweet, the maple syrup. A honey is manufactured from it that is not distinguishable in taste from the honey of the bee, and, both in a liquid form and in a comb manufactured by some artificial process and undistinguishable from bees' comb, is sold most extensively as bees' honey. Prof. Riley, before the Institute at Crawfordsville, repeated in sum and substance about the same thing, adding that really better honey could be made from glucose, than the genuine article itself. It is undoubtedly a good thing for corn growers, so far as the sale of corn goes, that so much of it is consumed in the manufacture of glucose, so also that so much corn is used in the manufacture of whisky.

That a politician who delivers addresses before farmers' institutes should make such gross blunders as are attributed to Gov. Porter, is not to be wondered at, especially when we take into consideration that the very swindlers who are imposing upon the public with their glucose imitations have perhaps made it convenient for him to see things in that light; but it is a serious reflection either upon his judgment or his candor, to suppose he knows anything of what he is talking about. We do wonder, however, at the recklessness of Prof. Riley in some of his reputed assertions, especially the addendum above, and hope that his address has been incorrectly reported. If his conclusions regarding entomology are as conveniently arrived at as are those relating to food economy, we fear his posthumous reputation as a scientist will scarcely survive the obituary. There is no justification for such blunders. That it is impossible to make a superior honey from glucose any reflecting individual may convince himself, if the trouble be taken to sample the genuine honey and counterfeit article together. Even the counterfeiters find it necessary to use a portion of genuine honey, either extracted or comb, to give flavor to their stuff. It is about time, however, that we should hear no more regarding the artificial comb honey. It is no credit to any person's intelligence to believe the story; and the scientist impeaches his own reliability when he asserts that artificial comb is manufactured by machinery, filled with glucose, and capped over independent of the labor of the bees.

AMONG OUR EXCHANGES

MISCELLANEOUS.

Paying Your Money but not Having Your Choice.—Mr. Zopha Mills, Jr., of New York, sends us the following excellent article from the New York *Journal of Commerce*, published under the above caption:

> "If people do not like glucose they need not buy it." This is the *Herald's* comment on what it calls "unnecessary legislation." Unfortunately the dictum does not square with the facts. The sale of glucose does not depend on the like or dislike of the people. They never see and know glucose sold by that name. "O! no, we never mention it; its name is never heard," the grocers would say if asked if they kept glucose for sale. It masquerades under a hundred fancy titles of syrups, or gives a deceitful whiteness to coarse brown sugar; but in all its protean changes it never once reappears as glucose. If one of the *Herald's* readers should start out with the determination to buy glucose, and see whether he liked it or not, he could not find any—sold as such. It is not advertised in any newspaper. It is not quoted in any market report. It is not placarded in any corner grocery. It has no recognized existence among the "people," but is only known to those who are in the secret of its uses for purposes of adulteration or substitution. Until it is sold openly for what it really is, and not for something else, the people's preferences cannot be said to be consulted. The average citizen is not a chemist. He has no sure and ready means of telling whether his milk is watered or chalked, his beer and whisky doctored, his butter larded and his syrup or sugar robbed of half its sweetening power by the admixture of glucose. If he is defrauded by adulterations, he has a right to complain. It is not a sufficient answer to say that he is not obliged to buy such impositions unless he wants them. As we have shown, he cannot buy glucose wet or dry (under its real name) of his grocer, however much he wants to try it. He might as well ask a milkman for watered milk, or a liquor-seller for turpentine gin, or a confectioner for candy with 50 per cent. of *terra alba*. Such articles are never to be had by retail consumers on inquiry. We therefore cannot accept the dogma of our contemporary as entirely fair to the people, since it is not possible to consult their tastes, while glucose, like oleomargarine, is never sold to them on its own merits. No reasonable man asks that the manufacture and sale of these substances shall be stopped. It is not alleged against them that they are poisonous or deleterious so far as known. They may have their proper places among the foods of the people. But oleomargarine is not butter, either "gilt-edged," "creamery" or "prime dairy." Glucose is not "maple syrup" any more than it is "bees' honey." Even if its healthfulness were admitted — of which we are by no means assured—it suffices to object that the pockets of the people as well as their stomachs need to be guarded against frauds in food. Will some manufacturer of oleomargarine or glucose be candid enough to give a single good reason why his product should not be always sold under its own name?

A Standard Frame.—Mr. Wm. Riatt, in the London *Journal of Horticulture*, remarks as follows on the subject of deciding upon a standard frame for Great Britain:

> I am pleased to observe that the British Bee-Keepers' Association has resolved on the discussion of the question of a standard frame to be "stamped with its sanction and authority." This Association now happily occupies such a paternal relation to bee-keepers generally as, I think, justifies it in at least attempting to grapple with this question. The pity is that it could not have been done years ago.
>
> Then, even though a bee-keeper adopts and determinedly adheres to a size of his own, he often finds himself in a difficulty when, through purchase or present, he may become the owner of a colony in another hive. Neither can he exchange or borrow a frame or two of brood, honey, or empty comb without in many cases having to make a transfer to his own frames, or tolerate an odd-sized frame for a time. And, after all, it can scarcely be said that any of the leading frames in use are other than arbitrary in dimensions. The discussion of the question, though opportune, is thus beset with great difficulties, and its settlement can scarcely fail to create unpleasant feelings somewhere. We may foresee, however, that if a decision is arrived at at all, it must be in the adoption of some style of frame at present extensively used.
>
> As a small contribution to the discussion from the Scottish point of view, and from one who does not make hives for sale, I may safely affirm that we in Scotland are all but unanimous in using what I may call the Scottish Woodbury frame. Mr. Woodbury probably adopted the internal dimensions of his hive, 14½ inches square, from the calculation that ten combs would occupy about the space of 14½ inches. We may, however, dismiss the idea of length—that is, measuring across the combs—as it is evident that hives may profitably contain more than ten frames.

The other dimension, which we shall call the width, is that which regulates the size of the frame. The internal dimensions of a Woodbury frame, whose end bars are 3/8 inch wood, and bottom rail 1/8 inch, will be 13¼ inches by 8½ inches. I am in a position to say that this size of frame is pretty general in England and Ireland as well as in Scotland.

I have been thus particular in regard to dimensions, not that I may ride a hobby, but because this particular frame contains within its measurements a unit I think ought to be in any frame claiming to be a standard. That unit is 4½ inches, the dimensions either way of the American 1 lb. section. The Langstroth frame, most generally used in America, holds eight of these sections; the frame I have described holds six exactly as to depth, but with about three-eighths of an inch of room to spare in the length. All bee-keepers who work sections in frames, either in the body of the hive or in a top story similar to that below, will at once see the force of my proposal that the dimensions of this section should be taken as the unit of measure in the British standard frame.

It seems to me, therefore, that there is ground for claiming that the standard that is to be should either be the improved Woodbury or the Langstroth. The latter hive is scarcely used in this country, and we believe its frames are too long for our short seasons and moist winters. Certainly it is more difficult to handle.

Bees as Weather Prophets.—The California *Apiculturist* remarks as follows on this subject:

Nature in her generous gift and liberal economy has not endowed man alone with premonitions of changes of the weather, but to all living creatures, more or less. It is said that the swine herald the coming storm, by running to and fro carrying straw, weeds or other material for the formation of a bed. Likewise geese, by running, flying, and by a continuous quacking and chatter. But from the close experience of a learned German apiarist, it would seem that nature has endowed the "blessed bee" with more instinct in this respect than she has most of the animal kingdom. As we have never given the subject much attention ourselves, we give the following from a bee-keeper who has done so:

"When on Wednesday your colony leaves the hives, coming out of the holes in a mass, and hover about, you may be certain that on Sunday the weather will be nice, or at least, will bring a good swarming day. Should this happen on Thursday, the good weather will set in on Monday, etc. At least, here in Germany this is the case; but whether in America it is likewise, must be ascertained from observation. When bad weather is about to set in, or a scarce time for the bees, the signs are as follows: Should the bees fly later than usual in the evening, it will generally rain the next day. Should they sit thick around the entrance-holes, lift the abdomen up, flapping with their wings, or move backward or forward with the head, as if they wished to chink up the place (we call this movement Hobeln), from 8 to 14 days of scarcity for the bees will follow, which days are noticeable for continued rain, wind and cold."

Adulteration Frauds.—Mr. G. W. Stanley in the Empire State *Agriculturist*, Rochester, N. Y., remarks as follows on this subject:

Since the oleomargarine frauds have come to the public notice, and since the facts have become known that some extensive dealers have seen fit to manufacture syrups and extracted honey of glucose or corn sugar, some persons, from what cause I know not, have seen fit to advance the idea that comb honey is also being manufactured and sold for the genuine article. Now, if there is one article that we eat, aside from our meat and potatoes, that comes to our hands in just the shape that it should, that article is comb honey. If those who are inclined to think that this is made in the way spoken of, which is to make the comb of paraffine complete, and then run in the melted corn sugar and seal over with a hot iron, will stop to think, they will at once see the mechanical impossibility of the thing. I know from long experience that it takes a vast amount of patience and some skill to make comb foundation as thin as the bees make it, without even attempting to make the side walls to the cells; and when we come to realize that these side walls are so thin that it takes 192 of them to make an inch in thickness, and at the same time those walls are made ¾ of an inch high in ordinary comb honey, it will be very easily seen that the thing is impossible. There is no Yankee yet so smart that he has invented a machine that will make comb foundation with base as thin as natural comb, and at the same time with walls 1-16 of an inch high.

This adulteration of food is bad enough, but let us enjoy, while we can, the blessing of knowing that some articles of food are still handed to us in their purity. If the adulteration of sweets could be stopped, the honey producers could then sell an article of extracted honey for 15 cts. per lb. that would be equally as good an article as the comb honey, for which he pays 20 cts. per lb., and still his profits would be as large and the consumer would get more for his money; but if we wish to find what can be done with a nice lot of extracted honey in tumblers, we rush to some of the large dealers in our cities and we get the answer: "We cannot sell your goods in that shape, as our customers want the goods put up fresh." Now, what does this word "fresh" mean? It means, you send us your honey in barrels, and we will take out 5 per cent. commission and pay you 9 or 10 cts. per lb. for it, delivered, and mix it with glucose that costs us 3 cts. per lb. and sell it for 20 cts. per lb. in tumblers. Thus the producers and consumers are alike swindled, and our honey loses its reputation, and the dealer makes 200 per cent.; the consumer eats glucose, and the man who produces the honey realizes about 8 cts. for his extracted honey. If those buying honey, either extracted or comb, would buy from the producer and not from the dealer, they would get a better article of extracted honey for 15 cts. than they now get for 20 cts., and the same comb honey that now costs 25 to 28 cts. at retail, could be had for 20 cts. in 25-lb. crates.

You need have no fear of getting impure comb honey, but when you buy extracted honey at the grocery, see that it has the name and address of the producer on the label, with guarantee of purity, and the nearer that producer is located the better.

Be Kind to the Bees.—The *Rural Canadian* says:

Considering that during the honey season, when we have most occasion to handle bees, their average life is not over three months, there is but little chance to cultivate friendship with them. Besides, the first smell of you they decide whether to treat you as a friend or a foe. No kind treatment that you can give them will ever change their dislike of you into love. Be gentle with them always, but gentleness will not conquer their aversion if they have taken a "sconner" at you. It is people who are bee-loved who should make a life-work of apiculture. The most that others can do is to let the little insects know from the start that they have their master.

Buying Bees and Transferring.—The *Indiana Farmer* remarks as follows:

To those who contemplate buying bees, we would say do so at once, so as to take advantage of all the season's work. A good colony now may well be expected to pay in honey its first cost or more. If you cannot afford to buy full colonies, get good strong nuclei, and they will soon grow into quite large colonies, especially if you help them with comb or foundation. The very best time for transferring bees is during fruit bloom. If you contemplate doing any of this kind of work, you should get your hives and fixtures all ready at once, so as to be in complete readiness when the time comes.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. This is a new pamphlet of 32 pages which we have just published. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

CORRESPONDENCE

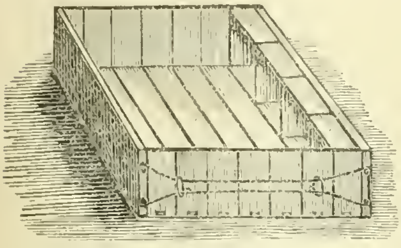
For the American Bee Journal.

Storing Honey in Sections.

C. H. DEANE.

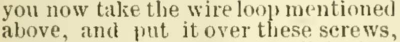
Some of my correspondents are complaining, that if I have a good thing, I ought not to be afraid to show it up, and as I certainly want all the bee-keepers in the land to give it a trial I will make the effort.

My system for top and side storing is composed of eleven cases, 2 hoop iron frames, 2 wooden clamps and 2 wire loops; these make one set for a 1½ story hive, by adding 7 more cases and 2 clamps, it can be made 2 stories, and increase the capacity from 44 to 72 lbs., and so on up as high as it is desirable to tier. To handle these cases you are to place 7 cases side by side and a clamp on each side; these clamps have 2 screws in each end; you now take the wire loop mentioned above, and put it over these screws, and this gives you 2 parallel wires running from one clamp to the other and about 2½ inches apart; place 2 small wire loops around these wires drawing them nearly together in the center. Now truss the cases up by shoving the small loops toward the screws in clamps; and if properly done the wires will ring like fiddle strings.



Deane's Section Case.

The iron frames are to suspend 2 of these cases on each side of the brood nest in the lower story, and are made to fit the cases. Any practical bee-keeper ought to be able to make this system, if he has a saw for dovetailing; but let him bear in mind, that it is absolutely necessary that the bottom bar come directly in the center of the end pieces, otherwise, in tiering up, the slots will not come directly over one another, as they should, in order that the bees may pass from one to the other. The system can be applied to any hive with movable combs.



Section, showing Joints.

The advantages of this system are:

1. The cases have no top bar, and the sections can be manipulated with perfect ease by the operator.

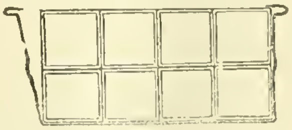
2. You can loosen the whole 7 cases in an instant, simply by shoving the small loops of wire to the center and lifting off the clamps. You can then pick out any case or section without disturbing any other.

3. You can use them with or without separators. When used without separators, use perforated division board in lower story.

4. The cases can be alternated from top to side.

5. They can be sent to market just as they come from the hive, simply by placing heavy brown paper on top and bottom and tacking strips across bottom and top and into clamps.

6. When trussed up you can handle the 7 cases like a solid box.



Iron Broad-Frame for Sections.

7. By arranging ¼ inch strips all around on top of brood frames and resting the cases on these, you can throw all the heat into the sections.

8. The sections fit the cases so snugly that there is neither end nor side shake when trussed up, and in consequence the bees will not stick the sections with propolis.

9. Any Langstroth or simplicity hive, 14¼ inches wide, inside measure, will take 7 of these cases and leave ¼ inch to spare.

It seems to me, Mr. Editor, that the advantages enumerated above are unnecessary; for after the testimony of the North American Bee-Keepers' Society that "it combines all the necessary arrangements simple and complete," (See BEE JOURNAL, vol. XVII, No. 42, page 333), that every bee-keeper in America ought to give this system a trial and test its merits.

Mortonsville, Ky., Feb. 2, 1882.

For the American Bee Journal.

Some more Slovenly Bee-Keeping.

J. H. MARTIN.

On page 181 of the BEE JOURNAL, the Rev. L. Johnson, gives us an extreme case of slovenly bee-keeping. And I venture to say, that nearly every bee-keeper in the country can point to just about such bee-keeping in his own vicinity.

Their object in keeping bees is to get just a little honey for their own use, and thereby save buying it, and it is a precious little they use, for the very first full box of white honey they take off is trotted off to the store and traded off for cheap molasses, at whatever price the merchant may put upon it. The "honey for home consumption" comes from those late swarms that are brimstoned in the fall. Such a class of bee-keepers ruin the country markets, and bring discredit upon the whole fraternity by their slovenly management, and finally their cruel taking off of the bees with brimstone. It is a great mistake for bee-keepers to give encouragement or aid to any person who has no taste for the business. If such a one is started in the business and subscribes for a bee paper, the reading is all Dutch to him, unless he posts himself from some standard work, and this but very few of this class will take the time or trouble to do, and the bee paper is soon thrown aside. Furthermore, a farmer that has all he can attend to, has no business to engage in bee-keeping, for where there are many irons in the fire some will burn, and it is sure to be the bee-keeping that will burn. There are many farmers' wives that would make capital managers of the neglected apiary, but household cares, numerous children, no taste for study, are barriers but few seldom surmount.

We have a plan that works very well with this class of bee men. If they are within six or eight miles of us, we first talk purchase to them. If they sell at a reasonable price we buy their entire apiary. If we cannot buy, we then make them an offer to take them on shares, and usually we can make a bargain with them to our mutual benefit. The farmer gets the benefit of expert handling, and gets more honey than he ever dreamed his bees could gather, while the expert bee-keeper will also reap a fair return for his labor.

Let us, therefore, encourage the person who is really in earnest and proposes to make it his business, and discourage the man who wants to keep bees just to get a little for his own use, by brimstoning his bees.

Hartford, N. Y.

For the American Bee Journal.

About Bee-Keeping in Colorado.

WOMAN'S INDUSTRIAL ASS'N.

There are at least 2,000 colonies of bees, mainly Italians, in the State. Colorado is as well adapted to profitable bee-keeping as California, and the honey we can produce is sweeter and whiter than any other introduced in the market. There is hardly a farm or garden in the west where bees will not prosper, and the mountain foothills are peculiarly adapted to them.

In the spring of 1870, Dr. King, of Boulder, Col., sent to Indiana for one colony of bees. They arrived in good order. Being a novice in the art of handling the little creatures, and having the fear of their sting in his mind, he had a hired man attend to them and get them comfortably fixed in their new quarters before he visited them. But, as all bee-keepers do, he soon learned that the fear was an idle one, and in a short time he could handle them as if they were house flies.

Allowing his bees to cast only one swarm from each hive, he doubled his number, and had a fine crop of honey. One colony filled 5 stories of the American hive full of honey.

Obtaining some imported Italian queens, he has since bred from them until now he has Italians in all their beauty and purity. Careless owners have allowed colonies to escape at swarming time and are now to be found wild in the mountains. Many trees have been found and cut down during the past 2 years for the sake of the honey stored in them. It even seems certain that they have gone "over the range," as they have been found by prospecters on the west side of Gray's peak within the last year, and, being Italians, must have crossed from this side. Locations at the foot of the mountains are in many places first-class. Such points as Golden, Boulder, Collins and Morrison in the north, and Manitou, Canon City and La Veta on the south, as well as many others probably equally as good, might be named. Indeed, any point that is in close proximity to low foothills and gulches that will give bees an opportunity to reach the higher altitudes without having to fly over high and steep mountains, can be set down as being a good location for bees; and these points string all along the range of hills from Wyoming to the borders of New Mexico.

But, in addition to this, bees do well also on all streams that are settled up and where the land is under fence and in cultivation; for the face of nature is covered from early spring time to late fall with flowers that afford honey in great abundance. Trees, wild flowers, vegetables, wild grasses, all offer their stores of sweet treasure to the ever busy bees.

The National Mining and Industrial Exposition, which is to be held in Denver, will open Aug. 1, this coming summer. The managers are now pushing the scheme through, and intend to have the main building ready for the reception of exhibits by the 15th of July.

Denver, Col., March 29th, 1882.

For the American Bee Journal.

The Bee Controversy.

G. W. DEMAREE.

Like Mr. Heddon, I have enjoyed the cross-fire controversy hugely. And I am willing that he shall have the closing argument—as between myself and him, though, "lawyer like," he has brought in a regular broadsider. Friend H. reminds me of a sermon preached by an old colored preacher about here some years ago. He was discussing the "st'a'fas'ness" of his faith; and as he waxed warm he went on to illustrate—"My brithering, my faith is liken unto the shakin' a possom outen de top ob a tall 'simmon tree—ah! you may shake, and shake, and shake, and he lets one foot holt go—ah! And you may shake, and shake, and shake, and he let anudder foot holt go—ah! And you may shake, and shake, and shake, and he let anudder foot holt go—ah! And you may shake, and shake, and shake, and he let de last foot holt go—ah! But you may shake, and shake, and shake, and shake, but all h—l will nebber make him break him tail holt—ah, ah!"

I have shaken Mr. Heddon loose all over, and yet he hangs in the tall "'simmon tree" without so much as the tail holt left. The discussion of the subject of "bands" and "pure" bees has become quite extended. Mr. G. M. Doolittle has favored me with a copy of the March No. of *Gleanings*. The author of A B C is evidently undergoing considerable tribulation. Mr. Doolittle has enlightened him on the subject of "bands," and there is to be an "amended clause" added to the A B C "window test," and falls back on to "alcohol" and the microscope," and finally begs for quarter. Medina has been "headquarters" for daughters of the imported "herd" for years past, and they must have "bands."

There is evidently a shaking going on among the "dry bones." A few years ago a man dared not hint that the famous Italian was a "thoroughbred" bee, and must be bred by selection to insure improvement. We are all "learners;" let the light shine, though all our cherished notions fall like autumn leaves.

Christiansburg, Ky.

For the American Bee Journal.

N. W. Iowa and S. E. Dakota.

W. PAXTON.

My report for 1881 is too insignificant to note, except to cover a locality unrepresented —Northwestern Iowa and Southeastern Dakota. In March I closed out the last of my Delaware Co. apiary, in the keeping of Mr. Meader, at $4 each, and in May purchased 3 colonies for $18, in bad condition, transferring them the last of May. One contained scarcely ½ lb. of bees, two were in better condition, but had not yet cleaned out the dead bees. I took about 130 lbs. of extracted honey, and increased to 7 by division—not quite so strong as I could desire, yet I hope to bring them through. Increase was my main object. From scarcity of drones, I lost 5 queens in mating, which put me back somewhat.

Our honey plants differ from those I have seen East, but my limited botany will not permit me to name them. The river banks are skirted with brushwood, called timber here, cottonwood, soft maple, box elder, elm, 4 varieties of willow, ash, and, at a distance of one mile, considerable basswood, walnut, and oak. Milkweed, of which we have several varieties, is abundant, taking possession of all vacant ground. My bees visited it for a long season, but I think the honey rather rank-flavored. Snowdrop grows wild in profusion, and its delicate pink blossom seems a favorite. Hartsease and a few prairie flowers give some honey, but the most persistant bloomer, is a plant growing 2 feet high, quite branching, long spikes of purple bloom, grows on roadsides and plentiful in hog pastures, visited all day, and every sunny day from early summer till frost. With this plant and the variety of willow blooming in July I wish further acquaintance. Of wild fruit we have currants, gooseberries, and abundance of plums, choke cherries, and grapes; but the honey plant which of all others I most esteem is rape, grown at first for seed, and since giving a volunteer crop. From this I think my bees got the first start, and from this I think they took pollen on the 5th of November.

The coming bee is a subject in which I feel a deep interest, being from boyhood an admirer of the little pets. Mr. Heddon and other renowned apiarists will pardon me if I lean to the side of beauty, and if I conclude to wait a further trial before stocking with Syrians from D. A. Jones. I shall take the bright and gentle Italians.

The coming bee hive is of equal interest with the coming bee. I have given the subject some thought, and although a bee-keeper for near half a century, I am free to confess I have never seen or used a hive that quite suited me, and while I have generally given a wide berth to patents, moth-proof and clap-trap generally, yet if all I have used were piled up to appear in judgment, it would not all be on the side of simplicity and utility. After wandering for things new, experience generally brings us back to the Langstroth; yet I am not quite reconciled to be shut out from the brood chamber while using a second story for surplus, and like Stewart and Whiting, see, or fancy I see, an advantage in reversing combs, and especially in transferring. I wish these men had given us a description of their frame and hive, and this reminds me that others may get an idea from a description of and help perfect the hive I use.

My frame is square to render it reversible, and give a compact form for brood. I have adopted 11¼x11¼ to give a double-wall for brood, with space for Langstroth frames above, the frames running parallel, so that by removing a frame above I can reach one below. This I design for out-door wintering and protection against spring and fall chilling. Two cushion division boards ⅞ in thickness, contracts the hive at will, giving space for chaff when needed. A summer entrance at each end, with one in the middle through the bottom-board, admits of cutting up into three nuclei, for which the size and shape of frames are suitable.

My object in explaining is the hope that some one may give a more simple, cheap and convenient hive, and at same time possibly return in part the many useful crumbs gleaned from correspondents of the BEE JOURNAL.

Notwithstanding the expensive experiments and partial failure of Messrs. Perrine and others, I am disposed to think favorably of cheap bees, safe wintering, and the advanced seasons of the sunny South. With an abundant flow of the sweetest nectar in the North, and direct communication by water and rail, is whereon I base my conclusions that a practical man at each end should make it win.

But what I intended as a brief report has grown too long, and I will close with the suggestion that in looking for the coming bee, breeders should direct attention to this isolated region where mating in the open air can be controlled as thoroughly as on D. A. Jones' isolated island, and with less risk of drowning.

Beloit, Iowa.

* * *

For the American Bee Journal.

Improvement in Bees, Etc.

WM. H. BALCH.

Twenty years ago, after I had kept bees for 5 years, I thought I was the smartest bee-keeper in all this region. I had read Quinby and some other bee literature, visited all the apiaries for miles around, asked all the questions and got all the knowledge I could, and I have been doing the same ever since. But about that time I began to find that there was more to learn, and, as I learned and experimented, the more ignorant I saw I was, and I have come to the conclusion that I do not know but little in comparison to what there is to be learned in the great field of bee-culture.

I am glad the BEE JOURNAL has taken so decided a stand on the grape sugar and adulteration question. Let us one and all take an active part and urge all to take hold with an earnest zeal to put down this adulteration business.

My bees last spring were, with a few exceptions, weak. I sold quite a number, some weak and some strong, just as customers wanted. I put 70 colonies into winter quarters, and right here (as I have been breeding for certain points), I want to speak about one colony in particular, as it contained one of the queens I had placed at the head. After the long winter there came a thaw, bees commenced to fly, and I began to shovel away snow and examine; now and then I came to one dead, and when I came to this one there was no stir. I gave it a bump with the shovel, but no response. Supposing the bees dead, I passed on. Not very long after it thawed again. As I had to go away, I gave particular orders to my boy to mark all hives where bees did not stir, so that we could take care of the combs and not disturb hives with bees in. In a few days after we commenced to pull out the hives of dead bees, when we came to this we pulled it out, took off the cover, and, to our surprise, there were 5 spaces filled with live bees, plenty of honey, and not one gill of dead bees. The next thaw was warmer than the previous spells, and these bees had a fine fly. They had as much pollen as any in the fall, and plenty then. This colony kept quiet all through bad weather, and did not dwindle nor increase very fast, but when it became warm enough for bees to get out and back alive, they made it count. I used it extensively for queen-raising, and increased it to 7 colonies, which filled their hives with honey.

Do not think I am enthusiastic over this colony. I merely speak of this colony to illustrate that bees are capable of being improved in the right direction, by close application and judgment. The best that I ever realized was 4 years ago. I had 45 colonies in my home apiary from which I sold $900 worth of comb honey and $600 worth of bees and had 60 good colonies to go into winter quarters with. They were not fed anything but about 100 lbs. buckwheat meal in the spring. Fifteen of the above did not swarm; these gave me a little over 300 lbs. of comb honey each.

In vol. 18, page 52, BEE JOURNAL, I cannot agree with Dr. Brown in regard to feeding all at once; they are more apt to crowd the brood nest, and when the feed stops are prowling about to rob; but the rest the Doctor says I can most heartily agree with.

I have often said that nearly all the honey gathered in the United States might be consumed at home in the country and small cities at a good price, without sending it to commission houses. I have experimented on this point for more than 20 years, and home trade will net on an average over 10 per cent. more than to sell it on commission. My trade far exceeds my production, and I cannot fill orders for want of honey. Some of the very men that 20 years ago I had to urge to buy one box, have within the last few years bought from 8, 10 and one as high as $13 worth each year.

Oran, N. Y.

* * *

For the American Bee Journal.

Notes from Washington Territory.

C. THEILMANN.

There are no bees in this part of the country, but I have seen some at Walla Walla, on Puget Sound, and at Portland. They were all neglected, however, and those who have bees know but little about them, not even about using smoke. One man was very much astonished when I puffed a little smoke on the bees that were clustered outside a gum, to see them all quietly moving into the hive.

After leaving Puget Sound and Portland, I have seen but two little patches of white clover, near a house-yard, at Walla Walla. Bees would probably do well in that vicinity, on account of the abundance of all kinds of fruits, flowers, berries, and shrubbery. There are also many kinds of wild flowers, willows and honey producing trees, and one kind of sage brush. All the bees that I have examined were strong, with plenty of honey. The winters in this locality are generally very mild, and bees would usually have an opportunity to fly every three to five weeks.

The climate here (Medical Lake, Spokan County) is somewhat like northern Illinois and Iowa. Eighteen degrees below zero was the lowest here this last winter, with about 2 feet of snow on the level, which is now rapidly disappearing, and some spots of ground are visible.

The country on this coast, so far as I have traveled, is not so compactly good as Iowa, Minnesota, or Dakota. There are many rocky places between the good lands, and only here and there have I found valleys and prairies, of from 15 to 50 miles long by 10 to 30 miles wide, all good land, where they raise from 30 to 60 bushels of wheat per acre; most of the wheat is soft, but plump. Roots and vegetables grow to enormous size. The climate east of the Cascade Mountains seems to be very healthy.

Spokan County, Wash. Ter.

[Mr. Theilmann, formerly of Theilmanton, Minn., has sent us a box of the Medical Lake powders, which he writes us are prepared by boiling the water from the lake till it resolves itself into a whitish or cream-colored powder, and has something of an alkaline taste. Mr. Theilmann speaks very highly of the curative powers of the water in the lake. This lake he describes as being formed in the shape of a kidney, 1¼ miles long by 100 rods wide, with a belt of pine timber surrounding it, and is about 50 feet below the surface of the land around it, with sloping banks to the water. It has some insects in the water, but no fish. There is no inlet nor outlet to the lake.—ED.]

* * *

For the American Bee Journal.

Anomalous Cases of Success.

G. W. ASHBY.

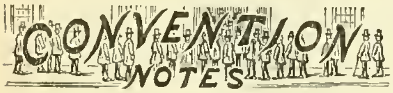
I see and read so much about upward ventilation, and again about putting cushions on top of the hives, etc., I do not know which to follow. I put woolen carpets over mine—some I put close on top, and others I left one corner open. I could see no difference in condition.

I went to see one of my neighbors; I did not know he had a bee on his farm till I walked around in the yard behind his house and saw two old box hives in a low damp corner of the yard, surrounded by plum trees, so thick when in leaf no ray of sunlight could ever penetrate them. I said to the gentleman: Are there bees in those old hives? He answered, I believe so. I went to them, turned one up, and out hopped two mice. It had stood there till the top had rotted off, with a crack in the side from bottom to top. I could put my finger in one corner, and it had sagged so it would hardly stand up. The man was going to move away, and wished to sell his bees. I told him they were worth nothing in that shape. He said the old box stood there in the winter of 1880-81, and cast off a swarm in 1881. Finally he said I might take them home and nurse them up, and if I could save them I might pay him what I thought they were worth. This was about March 14, 1882. I tied a rope around it to hold it together, put the two in my spring wagon, took them home, fed them till the 4th of April, then transferred them into Langstroth hives. The rotten one was the strongest, had more young bees and even drones out, and had more honey than the sound one. The honey was so old it was almost red.

Here was a case without any protection on top save rotten plank, glued together, and the side and corner open, which wintered safely through 1880-81, and after the dry year to winter again and have more honey than my Langstroths blanketed up and closed all but a very small entrance. It must have been the good old honey stored away that saved them, and it must be the bad honey that gives the bees dysentery and probably produces bacterium. and all the diseases known to the bee race. Here were mice, moths, and plum seeds carried in by the mice and glued up by the bees, with ants in abundance, all housed together. The bees look large and stout. Really, they are lively pets.

This case shows plainly, I think, that bees ought not to have the warm rays of the sun to cause them to fly out when the air is so cold as to cause them to fall and never rise again, thereby depleting the colony in the spring. This I count a rare case indeed. I have been keeping bees for upward of 25 years; in fact, worked with them when a boy, but I never saw such carelessness on the part of any man before.

Valley Station, Ky.



CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

April 19, 20—Tuscarawas and Muskingum Valley, at Coshocton, O.
J. A. Bucklew, Sec., Clarks, O.

Southeastern Mich., at Jackson, Mich.
J. H. Murdock, Sec., Dexter, Mich.

25—Texas State, at McKinney, Texas.
Wm. R. Howard, Sec.

26, 27,—Western Mich. at Grand Rapids.
W. M. S. Dodge, Sec., Coopersville, Mich.

26, 27—Western Michigan, at Grand Rapids.
Wm. M. S. Dodge, Sec., Coopersville, Mich.

27—Kentucky Union, at Eminence, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

29—Muskingum Valley, at Berlin Center, O.
Leonidas Carson, Sec., Frederick, O.

May 2, 3 -Eastsrn N. Y. Union, at Cobleskill, N. Y.
C. Quackenbush, Sec., Barnesville, N. Y.

11—Champlain Valley, at Middlebury, Vt.
T. Brookins, Sec., East Shoreham, Vt.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset. Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

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☞The semi-annual meeting of the Tuscarawas and Muskingum Valley Bee-Keepers' Convention, will be held in the Town Hall at Coshocton, O., on April 19 and 20, commencing at 10 a. m. A cordial invitation is extended to bee-keepers everywhere.

J. A. Bucklew, *Sec.*, Clarks, O.

Barren County, Ky.

The bee-keepers of Barren Co., Ky., met in Convention at the Sinking Spring School House, near Glasgow, on the first Saturday in April. The house was called to order by the Hon. President, I. N. Greer. The roll-call being dispensed with, the President called for new members, and several came forward and gave their names.

The minutes of the previous meeting were called for, read by the Secretary, and approved.

The Convention then proceeded to elect their officers for the next year, which resulted as follows: I. N. Greer, President; Mike Wynager, Vice President, and H. C. Davis, Secretary.

The following subjects were then discussed: What is the best plan to prepare bees for winter to prevent dysentery in the spring?

N. H. Holman said he wintered on summer stands, by placing a box over the hive with about 6 inches space between the box and hive, with the entrance open; he confines his bees in the lower story with the honey-board; has holes in the honey-board covered with perforated tin, to let the moisture escape.

Mr. Wynager said he removes the combs from the walls of the hives, and inserts an inch plank with quilt on top, with leaves or chaff for absorbents.

Dr, Allen said dysentery was caused by impure honey and too long confinement; give your bees plenty of good sealed honey, and keep them dry; winter on honey gathered early, and not on fall honey.

The President appointed the following committees to report after dinner: 1st. To arrange for honey show, R. J. Parker, W. J. Bradford, Wm. Arnot, Mike Wynager.

On questions for discussion: N. H. Holman, M. S. Reynolds.

Dr. Allen being called for, gave a very interesting lecture on the production of bees and honey. Among the many things he said, honey was a god-given sweet, and good enough for the gods to eat, and that all farmers could have honey, and many others, if they would give a little time and attention to bees.

The committee on time and place of meeting report Browder's Chapel as the place, and the second Saturday in August as the time. The report was received and the committee discharged.

The Convention discussed the subject which is better, natural or artificial swarming?

Mr. Wynager said, let your bees swarm if you are not an expert.

N. H. Holman said he prefers artificial swarming.

A. C. Davis said he thought artificial swarming the most desirable.

Wm. Arnot prefers natural swarms.

Question—Will it be profitable for every farmer to keep 10 or 12 colonies of bees, or is there any danger of being over-stocked?

N. H. Holman said we may overstock by all keeping bees.

M. S. Reynolds said we might overstock if we do not provide bee pasture.

Mr. Wynager thinks there is no danger of over-stocking, if they are looked after as you do other stock.

Question—Which is the most profitable, extracted or comb honey?

N. H. Holman said if you wish to increase, extracted is the most profitable; if you want no increase, comb honey is the most profitable.

Mr. Wynager said extracted was the most profitable, unless you use comb foundation.

J. T. Gray said he sells his extracted honey for 15 cents per lb.; thinks you may get double the amount in extracted. The discussion then closed.

On motion, J. H. Adams, of Glasgow Junction, Barren Co., Ky., was appointed purchasing agent for apiarian supplies.

On motion, the Secretary was ordered to furnish the American Bee Journal, *Farmers' Home Journal*, *Bee-Keepers' Instructor*, and the *Glasgow Times*, with a copy for publication.

The thanks of the Convention were tendered to the above papers, also to the neighborhood of Sinking Spring School House for their good attendance, and especially the ladies for their presence and their good dinner.

Adjourned to meet at Browder's Chapel the second Saturday in August.

I. N. Greer, *Prest.*
H. C. Davis, *Sec.*

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☞The Mahoning Valley Bee-Keepers' Association will meet at Town Hall in Berlin Center, Mahoning Co., Ohio, on Saturday, April 29th, 1882, at 1 p. m., sharp. All interested in the busy bee are invited.

Leonidas Carson, *Sec.*

☞The Central Michigan Bee-Keepers' Association will meet April 20, at Lansing, in the Capitol building. Programme.—President's annual address, Rev. J. Ashworth; bee hives and fixtures, E. W. Wood; Cyprian bees, J. Harper; the coming bee, Prof. A. J. Cook; care of old combs, Stephen C. Perry.

Rev. J. Ashworth, *Pres.*

☞ A special meeting of the Western Michigan Bee-Keepers' Association, will be held in Supervisors' Hall, Grand Rapids, Mich., Wednesday and Thursday, April 26 and 27, 1882.

Wm. M. S. Dodge, *Sec.*

☞ The Union Bee-Keepers' Association will meet at Eminence, Ky., on the 27th day of April, 1882. A full attendance is very much desired, as important business will be transacted.

G. W. Demaree, *Sec.*

☞ The Texas State Bee-Keepers' Convention will hold its meeting at Judge W. H. Andrews' Apiary, at McKinney, Texas, April 25, 1882.

Wm. R. Howard, *Sec.*

☞The Champlain Valley Bee-Keepers' Association will hold their semi-annual meeting at Middlebury, Vt., May 11, 1882.

T. Brookins, *Sec.*

SELECTIONS FROM OUR LETTER BOX

Narrow-Top Sections. — My bees came through the winter all right. They have been quite busy gathering pollen and honey for two weeks. Bees are in a better condition now than they were the first of May last year. The prospect for a good honey crop is encouraging and white clover is coming in abundence. I see in A. H. Newman's price list two kinds of sections or honey boxes—one with open top, like the bottom, are they better, and why are they so? Would you recommend tin corners for frames? Please answer in the next BEE JOURNAL. D. S. KALLEY.

Mansfield, Ind.

[In tiering up sections on the hives, as many prefer to do, it is necessary to have insets in the tops of the boxes, as well as at the bottoms, to allow the bees to pass up. When placed on the hive, the upper tier or set should be covered with a blanket or cloth of some kind, to prevent the bees escaping from the tops of the boxes. We do not admire metal corners for frames, and more especially where metal rabbets are used.—ED.]

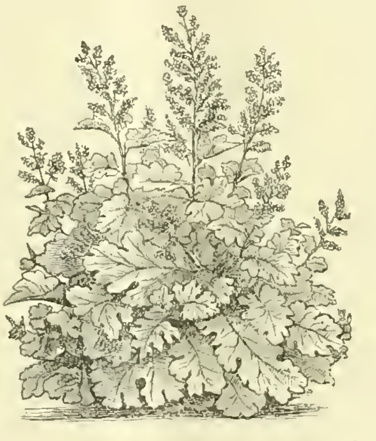
Laurel Honey Poisonous.—Bees appear to have wintered well this year, if protected on the summer stands. Last season was a very poor one in this locality for any kind of honey. Little or no honey in clover and basswood, and but a short supply of surplus from buckwheat and fall flowers. The failure was caused mostly by the drouth. There is a large tract of uncultivated land on this Island, called the Plains, on which grows extensively the broad-leafed laurel, known here by kill-calf, the same as kill-lamb, or stagger-bush of other places, which blooms about the same time as white clover. In dry seasons the honey gathered in the vicinity of this tract is very apt to be poisonous. Some bee-keepers take no surplus till buckwheat is in bloom, as the early-gathered is the only kind affected. In 1880, white clover yielded abundantly for a time, and then a severe drouth commenced, and honey from clover stopped. There were published in the county newspapers so many accounts of poisoning from eating honey, that people in this county feared to eat it, and the sale was hurt thereby. I believe the plan I adopted that year, of using and selling only white clover honey, that which was capped before the clover supply was cut short, prevented any poisoning from mine. The uncapped was left for the bees. If any one knows of another plan I would like to hear from them through the JOURNAL. As the white clover appears to have been killed by last year's drouth, our prospect this year is unfavorable, unless we sow buckwheat early as possible to clear the frost in spring, and continue at intervals through the season. The medium and late was good for the bees last year, but of little use some other years. SAMUEL HICKS.

Old Westbury, Long Island, N. Y.

But One Nucleus Colony Dead.—I have not had time and enough good weather since my return home to look over my bees and clean out all the hives. But there is only one colony dead out of 136 (a 5-frame nucleus), and not more than half a dozen, at the extreme, showing any signs of disease. I found them remarkably free from having commenced to rear brood, considering the warm winter. O. O. POPPLETON.

Williamstown, Iowa, April 10, 1882.

For Honey as well as Ornament.—We have here a plant, called Bacconia Japonica, which is a hardy perennial, and if once established in a garden or lawn it will sprout very rapidly. I have had it in my garden for many years, and my bees work on it all the time it is in bloom. I consider it good for honey and pollen. It would suit your inquirer, Mr. A. Montreville, exactly, as he wants something ornamental as well as for the bees to feed on; he would have to get the roots, if he wants it to bloom the first year. From seed it blooms the second year. Phacelia is also a honey plant; it is an annual and blooms all the summer and fall until frost. There are two kinds, white and blue.



High Hill, Mo. JOHN NEBEL.

Introducing Queens.—I have seen a good deal in the bee papers about introducing queens, but I think I have a method that beats them all for convenience at least, and for safety. I would use it in all cases where the queen has not been long confined (as an imported queen just arrived, when I would put her in a closed hive with frames of hatching brood and no bees but her own, as has been often recommended). I use an introducing liquid with which I wet the queen thoroughly, and immediately drop her into the hive among the bees, which I have had queenless at least 12 hours. In warm weather I often let her run in at the entrance, but must watch for a few minutes, for she sometimes runs out again and might get lost. There are doubtless many things that will do for an introducing liquid, but from my experience I would say that the liquid must contain, 1st, enough, and no more acid, to make it about half as strong as good vinegar; 2d, some substance that will adhere for a short time to the body of the queen after the volatile portion has evaporated, and not be injurious to her; 3d, some strong scent not offensive to bees. The first requisite is the most important, the second next, and the third least. I have been very successful with a weak solution of citric acid sweetened a little with sugar or honey, and scented with essence of peppermint. I have also succeeded under most adverse circumstances with the fresh juice of ripe Siberian crab apples. This season I have used weak vinegar (that has not "worked" enough) in a few cases, and succeeded perfectly. The advantages of this method will be recognized by all when once convinced of its safety. If those who wish to be convinced will try it on some cheap queens first, using either of the above preparations (warm of course), and letting the queens go, as soon as thoroughly wet, into the colony that has been 12 hours queenless, and have no queen cells or fertile workers, I think they will succeed every time. I would advise all trying this method not to open the hive until the subsequent day, when the queen will nearly always be found laying; but if not, it is not conclusive evidence that she is lost, for I had one queen wait a week or so before she began to lay. I have never known a queen to be injured by the bees when introduced in this way, unless they already had a queen or fertile worker, and sometimes not then. T. W. LIVINGSTON.

Ainsworth, Iowa.

High Water's Ravages.—Most all of the bees in our section are drowned out. Mr. M. A. Garrett has 70 colonies which are almost destroyed by the overflow, and Henry Stecla's are in the same fix. The water is still rising, with five feet where the bees stood. Bees can gather no honey. In some places the water is 3 feet above high-water mark.

CH. SONNEMANN.

New Iberia, La., April 7, 1882.

Better Prospects.—The spring never was more promising for bee-culture. The overflow is rapidly receeding, and good crops of cotton will be made. Greenville, and a large district below the town, was not inundated—the only portion of the great Yazoo Delta.

O. M. BLANTON.

Greenville, Miss.

Gathered Some Honey.—I put 28 colonies of bees in the cellar last fall, and they all wintered very nicely. They have gathered a little honey to this date. HENRY SCHMADAKA.

Germanville, Iowa, April 9, 1882.

Wintered Well.—Last fall I put my 19 colonies of bees in my cellar, all in good condition, though one or two colonies were rather light, but were strong enough to winter. On taking them out this spring they were all alive, and in good condition. The light colonies I had to feed, but they are all doing well now. They are gathering pollen. I began keeping bees 3 years ago, and have never lost but one colony in wintering.

STEPHEN WALSWORTH.
Onslow, Iowa.

Several Points.—If ordinary honey comb is 1 inch thick, cells ½ inch deep, and the bee's honey sac 6 times full will fill each cell, and in time of plenty of honey within ½ mile of the apiary, with pleasant days for bees to gather said honey, how many trips will an industrious bee make, say, in 10 hours, and how far will a bee travel in 1 minute on a bee-line to the honey field; and if it makes only 12 trips it will fill 2 cells; and if the hive furnishes only 6,000 honey-gatherers per day, they may fill 12,000 cells, and each frame contains 4,000 cells, the bees then will fill 3 frames per day, or 9 frames in 3 days; the 4,000 cells when full of honey and capped weigh 6 lbs., and the 9 frames would weigh 54 lbs. —why not the bees fill the honey boxes at the same rate, in time of good harvest, provided the colony contains 6,000 comb-builders and cappers, and 6,000 to gather pollen and water, and 6,000 to wax and clean and guard the hive, and 6,000 to care for the eggs, larvæ and young bees, and 6,000 young bees not able to work, but are on hand taking lessons to fill the places of those that perish every day by old age and labor? Thirty thousand is a very good colony of honest laborers. The honey-sac, when well filled, holds about the amount of one drop of water as dripped from the tip-end of the fore finger. If I am not correct, please give me the benefit of a full correction. R. M. OSBORN.
Kane, Ill.

[We cannot attempt to critically answer your query; but there is evidently something wrong in your figures. First, we might suggest your relay of 6,000 young bees constantly on hand is too large, as to keep it up to that standard would require a queen with a capacity to lay that number of eggs daily; second, no account is taken of the honey to be consumed by those comb-builders and cappers to accomplish their work; third, perhaps you have estimated too largely for the holding capacity of the honey-sac; fourth, as much time is probably lost in finding a suitable place to deposit the load when the bee returns from the field as it has taken to gather it; and fifth, we think you are a "little off" when you average 3 frames *filled* in one day, or 9 frames in three days, giving a yield of 18 pounds during each good working day. Let us continue your figures a little further: Suppose the white clover yield continues 21 days, and the 6,000 laborers work 18 days; then the basswood yield continues 18 days, and the bees work 15 on it, and after a while golden rod, buckwheat and asters furnish 23 days' work (with willow, fruit, box-elder and other bloom thrown in to make liberal weight), it would average 1,008 lbs. per colony—where in the wide world would we get spruce kegs enough to hold the honey crop of the United States?—ED.]

Honey Resources of Texas.—I arrived in this State in November last, and have visited a small portion of the country. I am much pleased with the climate and country for stock-raising, and especially for honey-producing. There are many who keep bees, but only few who are up with the improved methods of the North. J. G. Taylor, of Austin, says he took about 290 lbs. of honey from one colony. Others here report about the same. Mr. Fernoy, of San Antonio, has about 50 colonies, and is quite an enthusiast on bee-keeping. These, with one or two others, are all I have come across who make any pretensions to scientific bee-keeping. Texas is a brushy, grazing country, and nearly all the shrubs are bloomers. The whole face of the country is one vast flower-bed, so to speak, and I am told the honey-dews are abundant, which is a great assistance. Practical bee-keepers command good wages here; I have been offered $2.50 per day. There are many who keep bees in old boxes and logs; but few who keep them in "patent gums," as the Texans designate frame hives. When I came here it was for my health, which is much improved, and I think some of remaining if it continues as the season advances. Winter before last closed out my bee-keeping in Michigan. Out of 60 colonies I had but 5 left, and was sorry they did not die.

ERASTUS WEEKS.
Austin, Tex., April 9, 1882.

"Out of the Woods."—I guess I can say, "out of the woods." Weather is mild as June since the first of the month; every colony (23) in fine condition; a perfect world of bloom; apples not fairly open, and bees bringing in honey at a tremendous rate. Had to extract from one colony to-day to give the queen room; honey dark and very fragrant. With the above conditions for 2 weeks, I expect to take hundreds of pounds of honey from the apple bloom. White clover prospects very flattering. Three cheers and a tiger for the Weekly BEE JOURNAL.

C. H. DEANE.
Mortonsville, Ky., April 8, 1882.

An Early Swarm.—April 8th I had a rousing swarm of Italians. Who can beat it in the West, North, or East? J. F. KIGHT.
Poseyville, Ind.

Bee Moths.—I inclose herewith, for examination, something taken from a hybrid colony of bees. The hive referred to is a Langstroth frame, in my own style of hive. I wintered in what is called a "cold frame," formerly used for flowers. My covering for the brood chamber was of dried blue grass, packed 5 or 6 inches deep around the hive, the bottom board elevated 4 or 5 inches from the ground. I first noticed the space before the hive covered with, as I at first supposed, the refuse of old comb, but discovered on examining it through a microscope, to consist of wax and pollen filled with minute insects. The inside of the hive was dry; the bees, queen, and 8 frames of comb, in good condition, well filled with brood, honey and pollen, while two of the outside frames were entirely deserted, and all but a few cells destroyed. I collected a pint of—what is it? I treated the hive to a bath of boiling water, returned the eight frames, and 2 of foundation, and now await developments. I have consulted several of my amateur bee friends, and, as it was something new, we have concluded to refer the subject to you, and trust you will give us the benefit of your knowledge. I am located within one mile of the city limits, have only 10 colonies of bees, and it is with me a labor of love rather than of profit. JAS. B. SIMMONS.
Louisville, Ky.

[The sample sent is refuse or cleanings from the hive. It has the appearance of having been infested with moths, and the bees allowed them undisputed possession of the combs till such time as they wanted to prepare them for use, when they have cleared away damaged comb, moths, and dirt. There were several well developed moths in the rubbish when it reached the BEE JOURNAL, and several bits of moth-web.—ED.]

More About Albinos.—It was with much pleasure that I read the article of Mr. Valentine, in the BEE JOURNAL of March 29, 1882. I think the gentleman has very plainly shown the appropriateness of the name "albino," and hereafter I mean to call them as before, the "albino" bee. I thank him for the courtesy he has shown me in the article, and for the explicit manner of saying that I was not only the first to produce the bees, but also the first to call public attention to them. But I must differ with him when he says he was the first to give the albino bee to the public in its purity. He says that in 1879 he succeeded in breeding them "to a high standard of purity." If the gentleman will take the trouble to look up his BEE JOURNALS for 1876, he will see that I had them advertised "pure albino queens," and this was 3 years before he professes to have had them in their purity. He will also remember getting a queen from me in 1877, from which, by crossing, he procured his bees advertised in 1879.

I have a letter in my possession from Mr. J. L. Davis, of Michigan, dated Dec. 19, 1881, in which he speaks of an albino queen which he obtained from me in 1876, and also says he has 30 colonies of pure albino bees now in his apiary from her. I deem this, of itself, sufficient proof that I had the bee in its purity 3 years before Mr. V.
Smithsburg, Md.   D. A. PIKE.

Standard Langstroth Frame.—Allow me respectfully to ask the BEE JOURNAL's authority for asserting that the "standard" Langstroth frame is 17⅝ outside measure. Surely, if there is a standard it is that put forth by Mr. Langstroth himself, which, at page 372, 3d edition, "Hive and Honey Bee," he gives: Bottom 17⅜ outside, and inside triangular piece of top-bar, 16⅜, his sides being ½ inch thick. This would not take eight 4¼ sections. I believe this difference in the size of frames and hives has caused much inconvenience.   W. P. T.
Fitzroy Harbor, Ont., Canada.

The Langstroth Hive.—Please give the size of the standard Langstroth hive and frame in the BEE JOURNAL.
Van Wert, O.   R. H. BLACK.

[This matter has heretofore been called in question, and a reference to it was made on page 163 of the BEE JOURNAL for 1879. Mr. Langstroth's book was written more than 20 years ago, and it is not to be wondered at that a slight modification should be made in the frames, and the hives, also, for that matter, and gain his preference as this has done. The standard Langstroth hive, therefore, as recognized at the present day, is 18⅜x14⅛ inches inside measure, with a capacity for ten frames 17⅝x9⅛ inches outside measure.—ED.]

Doing Splendidly in Florida.—Our bees are doing splendidly. To give an idea, we will state what we did with 2 frames of brood in making an artificial swarm: Formed the swarm by taking 2 frames of brood from an Italian colony on the 16th of March; on the 26th of the same month it sent out a fine swarm; again, in 3 days after, it sent forth another swarm, besides furnishing us with 9 queens in the meantime.
ALDERMAN & ROBERTS.
Iola, Fla., April 7, 1882.

When and How to Clip Queen's Wing.—I believe the majority of apiarists of to-day prefer natural swarming to artificial. I have found it to be most successful in several respects. 1. Bees will swarm just as well with honey boxes on as they will with them off, and nearly as early. 2. You will get from 10 to 25 lbs. of honey before they swarm. 3. There is no danger of robbing; where, on the other hand, it takes very close watching to prevent it in divided colonies. Therefore, it is necessary to devise some plan to prevent bees from absconding and clipping the queen's wing is just what will do it, for bees to abscond without a mother means death. The best, easiest and quickest way to clip a queen's wing, is to lift the frame she is on gently, place it on your easel, and with a pair of small pocket shears gently lift her off the frame by putting the shears under her, let her crawl on your left fore finger, and now just place your thumb on one of her feet, and you have her at your command, raise one wing with your little shears, clip about ⅓ of it, and let her crawl back. It is quicker done than told. I clipped 36 in 2 hours, March 27th. They should be clipped before fruit trees bloom, as they are easier to find before the hive gets very populous.   J. F. KIGHT.
Poseyville, Ind.

Preparing to Swarm.—Bees are getting ready to swarm, with sealed queen cells and plenty of drones flying. It is no trouble to winter bees here in Brazoria County, Texas. Keep plenty of bees in your hives, and you will have no moths. There was not a week this past winter that bees did not gather pollen—about December and January from mustard, and in February from an evergreen tree called the wild peach. It is the first tree in bloom here, and the prairie and fields are full of blossoms now. By-the-way, is 2½ miles too far off from the timber or woods for bees to work profitably. Planted ½ acre of silver hull buckwheat, which came up in four days. I do not know whether it will do in this climate on the Gulf coast; will report in the BEE JOURNAL if allowed to. Bee-keepers that would like to correspond and find out about bee-keeping in this part of the world can address JOHN W. ROSS.
Velasco, Tex., March 26, 1882.

[Two and a half miles is too far to work with profit, unless there are forest trees like linden, or tulip, or sourwood, where the bees can load quickly and easily, without much trouble.—ED.]

Safely Through The Winter.—In looking over my bees, I find that they are all in fine condition—not one lost out of 135 colonies in the fall. I wintered them on the summer stand. They are very strong indeed, and have been working on soft maple bloom for the last week; in fact, the hives are well filled with bees, and have large sheets of brood in all stages. I find in several colonies capped drone brood. I would not be surprised if they would cast swarms this month if left alone. But this I will not do, as I intend to run them for honey and queen-rearing. I will just here state that I must convert my bees into ready cash just as fast as I can, for on last Thursday night burglars entered my store, and with drill, sledge and punch, broke open both of my safes and carried off all of my watches, jewelery and money, to the sum of $2,600, besides all of my customers' watches, and now for the second time the bees came to the rescue. Four years ago my store was broken open and robbed, but while there is life there is hope. I do think that my little pets will help me up the hill again. I am forced to sell them off closer than I otherwise would have done; but hoping that some of the many readers of the BEE JOURNAL may wish some of my golden Italians, and in that way help "a friend in need."   L. J. DIEHL.
Butler, Ind.

[Mr. Diehl certainly will receive the sympathy of all bee-keepers throughout the country. His loss must be somewhat discouraging to him, but we can assure him it is not as bad as it might have been, were it not for his well known reputation for integrity, and his unblemished business character.—ED.]

Honey Prospects in California.—At this date I have to report everything in a prosperous condition. We have had plenty of late rains to insure a good honey crop (or at least such is the opinion of the old bee men). We think the outlook for a good yield has not been as promising since the spring of 1878 as it is now. The bees are making every preparation for the harvest that is now so very close at hand. Between Christmas and New Year we moved our apiary from the mountains to the low lands, or willow country, where they have had the time and opportunity to breed up strong, and you can set it down for a fact that they are strong. The black willow is just coming into bloom, the filliree is at its best, with the mustard fast maturing, and then will come the valley harvest. We hope to harvest the valley crop, and still have time to move back to the mountains in time for the sages, thus securing 2 crops, one of dark and one of light honey—the valley being dark. One word for the Syrians: Last year being a poor honey year in California, and the first season we had handled the Syrians, we were not prepared to say much about them, and even now, only of their breeding qualities, which is A 1. Ours, this spring have bred faster and earlier than the Italians, and at this date (March 31) there are some of the Syrian colonies in the apiary that are as strong as Italians usually are the 15th of May, when sage harvest commences; but for all they are such extraordinary breeders, I do not expect any better results from them when the summer harvest comes than from the Italians. We aim to give each an equal chance when the sage harvest comes, and see which will carry off the laurels. Will report results next fall through the BEE JOURNAL.   A. W. OSBURN.
El Monte, Cal., March 31, 1882.

Gathering Pollen.—From 57 colonies of bees last fall, I now have 50. One starved and 6 smothered by the entrance becoming choked. Bees gathered pollen here from the tag elder on April 1st.   J. CHAPMAN.
Home, Mich.

Fruit in Bloom in Kansas.—My bees are doing well. I have Italians and "they are daisies." All the fruit trees are in full bloom.

S. C. FREDERICK.

Coal Vale, Kans., April 8, 1882.

As Strong as Last Fall.—My bees are in good condition. They are as strong as they were in the fall. I wintered my 12 colonies in a cellar, which was not dry by any means, but I had plenty of ventilation. I have made double-wall chaff hives for next winter, which will hold the regular Langstroth frame, 17⅝x9⅛. My bees gathered honey last week, but to-day is cold, and down to freezing.

FRED VARNAUF.

Cambridge City, Ind., April 12, 1882.

In and Out-Door Wintering.—The winter is past and appears to have been very favorable for our bees. Mine have come through nicely—about one-half I wintered out-of-doors, the others in a cellar. I cannot see much difference. Those that were out are in fine condition. Those that were in cellar are in good condition, the hives were left open at the top and bottom; were put in the day before Thanksgiving, and taken out April 1st. Bees have generally wintered well in this vicinity, very little loss.

S. GOODRICH.

Urbana, Ill., April 5, 1882.

◆

Mrs. Mayburn's Twins, by John Habberton, author of "Helen's Babies," is a book that will go straight to the heart of every mother in the land, and that mamma does not exist who will not vote it delightful? Natural as life, it sparkles on every page with delicious humor, and its occasional pathos is touching in the extreme, while the style of composition betrays a master hand. No one who likes to read about children, their mothers and the home circle, should miss this truly absorbing and fascinating story. It is a gem of the first water in a setting that adds vastly to its attractiveness. Mothers and fathers especially will find it a treat of the rarest kind. It is published in a large square duodecimo volume, paper cover, uniform with "Helen's Babies," price 50 cents, and will be found for sale by all Booksellers, at all News Stands, and on all Railroad Trains, or copies of it will be sent post-paid, on remitting the price in a letter to the Publishers, T. B. Peterson & Brothers, Philadelphia, Pa.

◆

☞The Southeastern Michigan Bee-Keepers' Association will meet at Jackson, Mich., in the City Council Hall, April 20, 1882, by order of the President. All bee-keepers are invited to attend; let there be a good turn-out.
J. H. MURDOCK, *Sec.*, Dexter, Mich.

◆

To Promote a Vigorous Growth of the hair, use Parker's Hair Balsam. It restores the youthful color to gray hair, removes dandruff, and cures itching of the scalp. 11w5t

OLDEST BEE PAPER IN AMERICA — THE AMERICAN BEE JOURNAL — ESTABLISHED IN 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance:

For **4** weeks		**10**	per cent.	discount.
" **8** "		**20**	"	"
" **13** "	(3 months)	**30**	"	"
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" **39** "	(9 months)	**50**	"	"
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Discount, for **1** year, in the MONTHLY alone, **25** per cent., **6** months, **10** per cent., **3** months, **5** per cent.

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Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,

974 West Madison Street., Chicago, Ill.

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

"How do You Manage," said a lady to her friend, "to appear so happy all the time?" "I always have Parker's Ginger Tonic handy," was the reply, "and thus keep myself and family in good health. When I am well I always feel good natured." See other column. 11w5t

The Apiary Register.

As the time is now at hand to commence the use of this valuable book, all who intend to be systematic in their work during the coming season, should obtain a copy and commence to use it.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞To any one sending two *new* Weekly subscribers for a year, we will present a volume of the BEE JOURNAL for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our *new* subscribers will be pleased to learn that they can get it for $1.00, by sending for it *at once*, before they are all gone.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75.

Bees and Honey, or Management of an Apiary for Pleasure and Profit. This is the title of our new book. The first and second editions having been exhausted, and being desirous of having it "fully up with the times," including all the various improvements and inventions in this rapidly increasing pursuit, we have thoroughly revised it, re-writing some chapters and adding several new ones, in order to present the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth 75 cents; in paper covers 50 cents, post paid. The following is its Table of Contents:

PAGE.
NATURAL HISTORY OF BEES 11
Introduction 11
The Races of Bees 13
The Queen Bee 13
The Drone Bee 16
The Worker Bee 17
Brood 19
Production of Wax und Comb 20
Pollen, or Bee-Bread 24
Propolis, or Bee Glue 24

ESTABLISHMENT OF AN APIARY 25
Situation and Arrangement 25
Bee-Keeping a Science 25
Who Should Keep Bees 26
Suitable Location 26
Which Way Should Hives Face 28
When to Commence 28
How Many Colonies to begin with 28
Removing Bees 28
What Kind of Bees to Get 29
Buying Swarms 30
How to Care for a First Colony 30
Bees Kept on Shares 30
Bees Marking their Location 31
Changing the Location 31
Will Bees Injure Fruit? 32
Cleansing Combs of Dead Brood 33
Ants in the Apiary 34
Removing Propolis from Hands 34

HIVES AND SURPLUS RECEPTACLES 35
What Hive to Use 35
The Langstroth Hive 36
Production of Choice Honey 38
Single Comb Honey Sections 39
One-Piece Honey Sections 40
Cases for Holding Sections 40
Making Hives and Surplus Boxes 43

PRODUCTION AND CARE OF HONEY 45
Preparation for the Market 45
How Should Honey be Marketed 45
Assort and Grade the Honey 47
How to Get Bees out of Boxes 47
Management of Comb Honey 47
Honey in Unglassed Sections 49
Handling and Shipping 50
Candied Comb Honey 51
Management of Extracted Honey 51
Honey Must be Ripened 56
Metal Corners for Crates 57
Putting the Glass in the Sections 57
Honey as a Commercial Product 58

MANAGEMENT OF AN APIARY 59
Luck or Scientific Management 59
The Italian Bees 59
Italianizing the Apiary 60
Introducing a Queen 60
Inserting a Queen-Cell 62
Nucleus Colonies 64
Dividing the Colonies 65
Swarming; how to Control it 67
How to Hive a Swarm 69
The Loss of the Queen 69
What are Fertile Workers 71
Transferring from Box Hives 72
Transferring from Frame Hives 74
Uniting Weak Colonies 74
Clipping the Queen's Wing 75
Washing Out Drone Brood 75
Removing Bees from the Combs 75
Preparing Bees for Shipment 76
Uniting Colonies in the Spring 78
How to Separate Swarms 78
Robber Bees 80
Feeding Bees 80
Quieting and Handling Bees 82

Management of an Apiary—Continued.
Shipping and Introducing Queens 85
Bee Dysentery 87
Foul Brood Disease 87

HONEY EXTRACTOR AND ITS USE 89
The Invention of the Extractor 89
When to Use the Extractor 92
How to Extract 93

COMB FOUNDATION AND ITS USE 95
Invention of Comb Foundation 97
Preserve the Wax 99
Comb Foundation Not Artificial 99
Fastening Foundation to Frames 100

BEE PASTURAGE A NECESSITY 103
Trees for Shade and Honey 104
Plants for Field and Roadside 108
Plants for Honey Exclusively 115
Honey Plants for Decoration 119

IMPROVEMENT IN BEES 131
The Bee of the Future 132
Lengthening the Bee's Tongue 133

HONEY AND BEE SHOWS 135
Exhibitions at Fairs 135
Effect of Bee and Honey Shows 138

THE WINTERING OF BEES 141
Chaff Packing for Winter 142
Preparing Cellar for Wintering 144
House for Wintering Bees 145
Wintering Bees in Clamps 146

GENERAL ADVICE TO BEGINNERS 147
General Information Necessary 147
Selecting a Location 147
Plan for an Apiary 148
Adopt a Standard Frame 149
Keep an Apiary Register 149
Increase by Division 149
Artificial Swarming 152
Preparing Feed 153
Guard Against Overstocking 154
Provide Continual Honey Bloom 154

◆

☞ We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal.

◆

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

The Apiary Register devotes 2 pages to each colony, ruled and printed, and is so arranged that a single glance will give a complete history of the colony.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

◆

☞ The Bee-Keepers of Virginia and Maryland are invited to meet at the Court House in Hagerstown, Md., on April 20, at 11 a. m., to organize an association. D. A. PIKE.

◆

For man it has no equal; for beasts it is not excelled. What? Kendall's Spavin Cure. 14w4t

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 17, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 8c. for dark and 10c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax, on arrival; 18@22c. for medium grade, and 15@17c, for dark.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

HONEY—The demand for comb honey is slow, and prices nominal at 16@20c. on arrival. Extracted honey is in fair demand. Our jobbing prices for 1 lb. jars of clover honey are, per gross, $25; for 2 lb. do., per gross, $42. The demand for manufacturing purposes is very good. We pay 8@10c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb honey is very scarce and commands 22@25c. per pound. Other grades, partly dark and dark are very slow sale. Extracted firm at 9@12c., according to quality and style of package.

R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—There is a liberal supply of honey here for which trade is very little demand, and prices rule weak and irregular.

We quote as follows: White comb, in small boxes, 18@19c; dark, in small boxes, 12@14c. Extracted, white, 10@11c.; dark, 7@9c.

BEESWAX.—Prime quality, 21@23c.

THORN & CO., 11 and 13 Devoe avenue.

SAN FRANCISCO.

HONEY—Buyers are few, and holders anxious to clean out offerings. We hear of no inquiry, except in a small jobbing way, and on such orders buyers refuse to pay any material advance on quotations.

We quote white comb, 16@18c.; dark to good, 10@14c. Extracted, choice to extra white, 8@9c.; dark and candied, 7c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—In fair demand. Strained selling at 8@10c.; comb scarce—nominal at 18@22c. Sales 500 lbs. extracted at 10½c., 1,050 lbs. do. at 11c.

BEESWAX—Stiff at 20@21c. for prime.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—The market remains unchanged; 1 and 2 lb. sections of No. 1 white are in regular and quick demand at 21@22c. No. 2 white has dragged a little of late, but took a lively start to-day at 20c. cleaning out all stock on hand. Buckwheat no sale. Extracted is quite active at 12c. for small and 11c. for large packages.

BEESWAX—25@30c.

A. C. KENDEL, 115 Ontario Street.

PAINE & LADD,
HALBERT E. PAINE, Late Comm'r Patents. STORY B. LADD. } WASHINGTON, D. C.
Solicitors of Patents and Attorneys in Patent Cases. 16w3m

CLOVER SEED

Owing to the increased demand for Melilot and Bokhara Clover seed, my liberal supply has been exhausted, and I can obtain no more in this country. I cannot, therefore, fill any more orders for either until the new crop comes in, and more can be imported.

Orders for Alsike and White Clovers will be filled promptly upon receipt.

A. H. NEWMAN,
16wtf 972 W. Madison Street, Chicago, Ill.

DUNHAM COMB FOUNDATION—35c. per pound; extra thin and bright, 10 sq. ft. to the lb., 45c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13w1y

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

TIN POINTS for GLASSING HONEY

Cut by machinery; are much cheaper and better than hand-cut, and perfectly straight; 1,000 to 5,000, 25c.; 6,000 to 10,000, 22c.; over 10,000, 20c.; 6c. per 1,000 extra by mail. Samples for 3c. stamp.

W. C. GILLETTE,
15smtf LeRoy, Genesee Co., N. Y.

BEES ON SHARES.

I desire to take about 10 strong colonies of Italian Bees to run on shares in the customary way, and invite correspondence to this end. I can care for them both in winter and summer, having a good place and pasturage.

16w2t **H. L. PENFIELD,** Hunnewell, Mo.

TWO HUNDRED COLONIES

OF ITALIAN BEES,

will be sold at auction on Saturday, April 29, 1882, 40 rods northeast of Seneca Depot, on C. R. I. & P. Railroad, in LaSalle county, Ill.

16w1tp **D. L. CARPENTER.**

QUEENS--QUEENS

Circulars free. Address,

15w6m **JOS. M. BROOKS,** Columbus, Ind.

Full Colonies of Italian Bees,

in the Langstroth frame, shipped in ONE-STORY SIMPLICITY HIVES, at $7 each.

15w4t **R. I. BARBER,** Bloomington, Ill.

INQUIRIES

CONCERNING

THE CLIMATE,

Mines, Manufactories and Commerce

OF

COLORADO,

will be promptly and truthfully answered by private letter, upon sending One Dollar to the

Woman's Industrial Association,

15w6m 291 Sixteenth St., **DENVER, COL.**

D. A. PIKE, Box 19, Smithsburg, Wash. Co., Md., breeder of those **Beautiful Albino and Italian Queens and Bees,** which gave universal satisfaction last season. Send for circular. 8sm6t

ANOTHER NEW IDEA.

Foundation all ready for business. Every sheet wired and bound around with a light wooden rim, ready to adjust instantly in your frame. No advance in price. Small sample for 6 cents. I shall also breed choice Italian and Holy Land Queens, practicing a new stimulative process. Write now for prices and particulars. Address,

9smly **JOHN H. MARTIN,** Hartford, N. Y.

MY **16-PAGE PRICE LIST** of Italian, Cyprian and Holy Land Bees, Queens, Nucleus Colonies and Apiarian Supplies, will be sent to all who will send me their name and address on a postal card.

H. H. BROWN,
14smtf Light Street, Col. Co., Pa.

Be SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian, Cyprian and Holy Land Queens and Bees.

J. C. & H. P. SAYLES,
4sm15t Hartford, Wis.

NOW READY, LAKES CIRCULAR
ITALIAN BEES & QUEENS
HIVES, SECTIONS, FEEDERS &c
BALTIMORE
SUNNY SIDE APIARY

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **24c.** per pound, delivered here, Cash on arrival. Shipments solicted.

ALFRED H. NEWMAN,
972 West Madison Street, CHICAGO, ILL

Bees and Queens a Specialty.

I have a choice lot of Tested Italian Queens, also Full Colonies of Bees, I offer for sale cheap. I shall breed and have for sale after June 1st, young Queens from the best of Imported stock. Satisfaction guaranteed. Price list free.

11w5m **I. S. CROWFOOT,** Hartford, Wis.

65 *ENGRAVINGS*

The Horse

BY B. J. KENDALL, M. D.

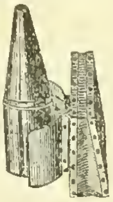
A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of receipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
974 West Madison Street, CHICAGO, ILL.

FOR SALE—150 Colonies of Italian Bees in improved Quinby hives, in prime condition.

39wly L. C. AXTELL, Roseville, Warren Co., Ill.



BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including the CONQUEROR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
972 W. Madison, CHICAGO, ILL.

FREE! FREE!

Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.

11wtf E. A. THOMAS & CO., Coleraine, Mass.

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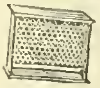

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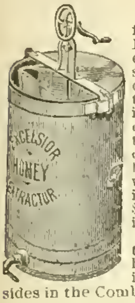

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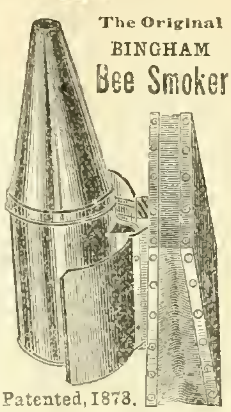

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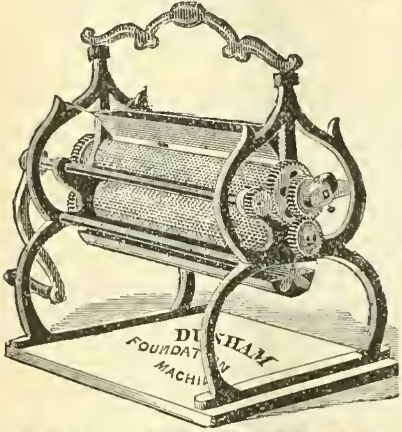

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.. 257
Removal.. 257
Foreign Buyers in our Markets.............. 257
Priority in the Use of Sections............. 258

Among Our Exchanges—

The Ariel of the Spring......................... 259
Artificial Swarming in 1762.................. 259
Watching the Bees 259
Grafting Wax... 259

Correspondence—

Producing Comb Honey—No. 5............. 260
Odds and Ends 260
The Hive I Use and Prefer 261
Light or Dark Colored Italians 261
Chemical Properties Required in Soil 262
Bee-Keeping in Sweden......................... 262
Bees' Tongue Register 263
Improvement in Italian Bees.................. 263

Convention Notes—

Local Convention Directory.................. 264
Saunders Co., Neb., Convention............ 264
Eastern Michigan Convention................ 264

Selections from Our Letter Box—

Cool Yet.. 264
Frost and Swarms.................................. 265
Queen Feeding a Drone......................... 265
Loss about Ten per Cent....................... 265
Prepared for Dividing........................... 265
Water! Water!....................................... 265
Not very Plain 265
Fruit Blossoms all Killed....................... 265
Jubilant 265
The Golden Bee Hive............................ 266
Planting for Honey................................ 266
Grateful 206
Honey Store-Room................................ 266
Universally Cold................................... 266
Pullen 266
Bees Swarming..................................... 266
Removing Queen Cells.......................... 267
Plenty of Bloom.................................... 267
Clover Uninjured 267
Bees at the College............................... 267
Harmless... 267
Cheerfulness Prevails............................ 267
Flowers on Every Side 267
Cyprian Bees... 267
Bee Pasturage....................................... 267
Gnawing Off Combs.............................. 267
Prospect of Honey Harvest 267
Bee Stings 267
Wintering in Cellar............................... 267
Building Up 267

Removal of Our Office.

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* * *

Foreign Buyers in Our Markets.

It will be seen, by reference to the letter, from Mr. J. E. Pleasants, Anaheim, Cal., on page 267 of this issue, that foreign buyers are already in our markets, gathering up the prospective honey crop. He says: "There are parties here now making very liberal offers for the coming crop." This we foresaw months ago, and predicted it in the BEE JOURNAL as an inevitable event: and perhaps in this connection we may congratulate the bee-keepers of California on their meager honey crop last season, which has had a tendency to advance prices higher than could have been done with a plethoric market. It will be a matter for self-reproach, if the apiarists of California do not hereafter find a remunerative market at their very doors for every pound of honey they have to dispose of, instead of being obliged to pay excessive transportation rates to bring their honey into competition with the product of a vast country as generous as their own in production, and quite its equal in quality, on this side of the mountains. The question is no longer—Where will we find a market? but, How best can we secure the production? Again do we suggest the careful and unprejudiced consideration of the bee pasturage problem. Every bee-keeper in America should settle the question for himself, from actual investigation, whether he can prolong the yield, or secure a continuous honey flow. He should know from actual, personal knowledge, what is best for his climate, soil, and convenience. For many honey-producing plants now is the time to procure the seeds and deposit them in the ground. Three or four liberal patches, planted this spring, may insure success in the future.

* * *

☞ The Bees' Tongue Register which we noticed in a late number of the BEE JOURNAL as being received from Mr. J. H. Martin, may be seen illustrated on page 273 of this JOURNAL, to which we would call attention. It looks pretty but as we have had no chance to test it, we cannot speak of it practically.

Priority in Use of Sections.

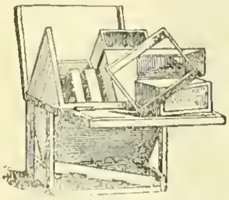
Mr. Friedemann Greiner, Naples, N. Y., writes us as follows:

In one of the last numbers of the *Bienen Zeitung*, Herr Griflav claims to have invented the section box before it was used in America. Now, if the invention was made by an American before the year 1875, and this is stated in the AMERICAN BEE JOURNAL of 1874 or 1875, please inform me, as I was not a reader of the JOURNAL then.

There were several patents taken out for sections prior to the date mentioned above, many of which were described and some illustrated in the AMERICAN BEE JOURNAL, from which we select the following:

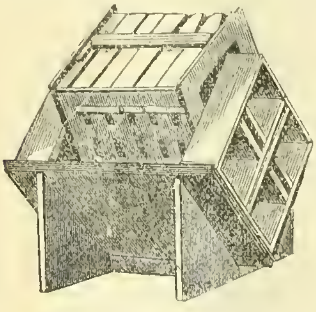
April 6th, 1852, Mr. E. W. Phelps received a patent for section boxes in frames, which was twelve years prior to the date given by our German contemporary.

Dr. A. V. Conklin, of Bennington, O., patented his summer and winter bee hive Oct. 20, 1868, which contained sections for surplus comb honey, and which was described and illustrated in the AMERICAN BEE JOURNAL for April, 1869, page 187.



Conklin Hive and Sections.

In our paper for June, 1870, Dr. J. M. Price, of Buffalo Grove, Iowa, illustrated and published, on page 257, his patent bee hive, the surplus arrangement of which he describes as follows:

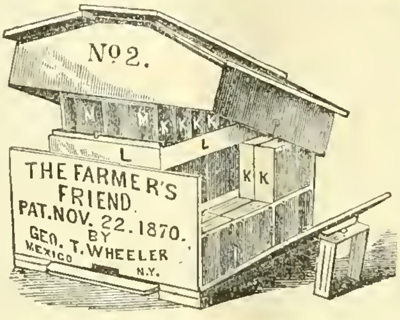


Price Hive and Sections.

> The surplus honey can be had in boxes or sections, and can be taken from the top or side of the hive.... The surplus honey sections are in close connection with the brood chamber and with one another....The sections can be used to the full capacity of the hive or of the bees to fill them, and the bees can be forced to work on any number at once, thereby greatly increasing the yield.

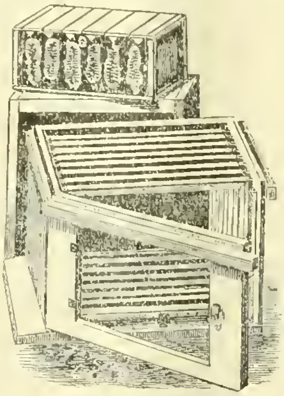
He claimed that this invention was destined to mark a new era in profitable bee-keeping.

On Nov. 22, 1870, Mr. Geo. T. Wheeler, of Mexico, N. Y., received a patent on tin separators, to be used in connection with one-comb honey sections. Mr. Wheeler remarked at that time, that he did not claim to be the inventor of section boxes, but had commenced his experiments with separators as early as 1867, which is corroborative proof that sections were in use before that time—probably many years before.



Farmers' Friend and Sections.

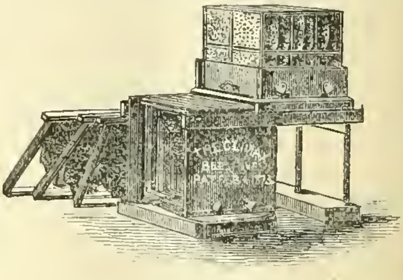
Messrs. Reynolds & Brooks, of Lexington, Ill., patented the "farmers' bee hive," March 28, 1871. This was largely advertised and illustrated in the AMERICAN BEE JOURNAL of May, 1873, and the cut used of the hive at that time shows the sections in place on top.



Reynolds & Brooks Hive and Sections.

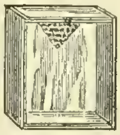
On January 7, 1873, Messrs Barker & Dicer, of Marshall, Mich., patented a "dovetailed sectional honey box, made with two wide and two narrow pieces so arranged that they form openings between each section." The narrow pieces are to allow a free entrance for the bees, and also to facilitate their use in tiering up. This is the dovetailed section in use at the present day.

The "Climax bee hive," patented in 1873, was advertised in this paper in the April number, 1875, and illustrated with a rack of sections sitting on top.

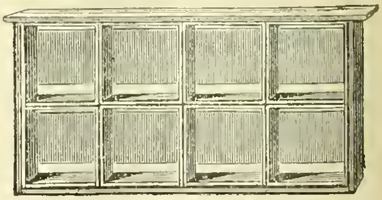


Climax Hive and Sections.

Thus we have shown that sections for surplus comb honey were in use in America for fully thirty years, as can be substantiated by the official records in the Patent Office at Washington, D. C. How long a time prior to that date they may have been in use, we have no means at hand of determining—but probably long previously. It is notable that among the first devices for the purpose of securing small packages of comb honey, was substantially the prize section of the present day, and which has quite recently become so popular in Germany, England and elsewhere. The case or broad frame, to hold the sections in the brood chamber or super, was also used in connection with some of the hives, and will be seen illustrated in some of the cuts.



Nailed and Glassed Section.



Case of to-day, with 4¼x4¼ Sections.

The illustrations given in this article (except two last) are printed on the identical cuts used in the BEE JOURNAL at the dates mentioned above. The broad frame or case of to-day we illustrate to show, by comparison, that it is only a modification of those long preceding it, and it is almost a counterpart of that used by Dr. Price.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Apiculturist.

The Ariel of the Spring.

ALBERT F. KERCHEVAL.

Tireless toiler, with thy wing,
Winnowing soft the breath of spring,
Darkling doubt is over, sing!—

Sing of bright and summer hours,
Sing of dreamy summer bowers,
Sing of fragrance-haunting flowers,

Laden with their nectar sweet,
Glad that wait the lips to greet,
As when trembling lovers meet;

Sighing, beck'ning everywhere—
On the mountain slope afar
Lifting high its mighty bar,

In the valley, on the plain,
Nestling 'mid the cereal grain,
Kis t by sun and dew and rain,

Wreathing Nature's smiling face,
Bending with their tender grace
Over each lone vacant space.

O, thou arial spirit fleet,
Flitting swift from sweet to sweet,
Every flowery queen to greet,

Sipping nature's fairy wine;
O, that thy sweet life were mine;
Even brief and bright as thine!

One sweet revel all the hours
'Mid the dreamy, tender bowers,
Then to die 'mid dying flowers!

Los Angeles, Cal., March 20, 1882.

* * *

Artificial Swarming in 1762.—Mr. J. M. Hicks, in the *Grange Bulletin*, gives the following historical item:

Swammerdam, who wrote in the latter part of the seventeenth century, mentions a bee-keeper. who knew the art of producing queen bees at pleasure, and of securing thereby four times as many swarms annually as were usually obtained by the old plan of natural swarming. In 1762, Graewell, in his "Approved Bee Culture," gave directions for making artificial swarms and dividing colonies, and Schirach published a special treaties on the subject in 1770, in which he first announced the fact, previously known to but few, that bees are able to raise a queen from worker brood. The practice seems to have been of but little success, as many facts having an important influence were then unknown, and the hives then in use were ill-adapted to the business. The elder Huber and others of his time, made a success of artificial swarming, when they developed the movable-frame system and made their important discoveries in the physiology of the bee. Their practice, though, was necessarily imperfect, and was seldom practiced successfully, except by the most expert and well-informed apiarists. Since that time rapid advances have been made in this branch of bee-culture. It would require a volume to describe all of the different modifications of artificial swarming, with the advantages and disadvantages of each. The reader can consult the works already published, in most of which this subject has been extensively discussed.

* * *

Watching the Bees.—Mrs. L. Harrison, in the *Prairie Farmer*, gives the following account of an interview between herself and a neighbor.

"I couldn't find you in the house, and I suppose if I want to see you I shall have to come to the bee-yard until October."

"Isn't it a nice place, this delightful weather?—take this rustic seat and watch the bees, sailing in loaded."

"My grandmother used to keep bees in the old country, and in the fall she would dig a hole in the ground, make a little fire of sticks dipped in brimstone, and set her hive over it, and in a few moments all the bees would be dead. Her hives were not like yours, they were straw skips, just like you see in pictures. Oh! look at the bees with their legs covered with wax. How I would like to see one load his feet."

"That isn't wax, Peggie, but pollen, what we call bee-bread—the bees feed their young with it. Those that drop down so heavily, are either gathering honey or carrying water."

"Indade, sometimes I'm afraid of me life, when I go to the well after water, there are bees in the pump spout and in the gravel around it—they are not always particular about what they drink, for sure haven't I seen them sucking the manure piles after a rain, and when Tim Shay plastered his house, they were in the mortar bed ating it, and the boys killed a dale of 'em, pelting 'em and spatting 'em into the mortar with shingle paddles. I told the wicked craythurs to stop it, but not a bit would they bide my bidding."

"People think they must have some badly tasting stuff called medicine, or bitters like tansy and whisky in the spring, to regulate their digestion, and the bees are only following their example. I've known doctors to prescribe lime water for a little baby, and bees love salt and ammonia, and who knows but that they may need lime, if they haven't any bones."

"What have you that sack tied to the limb of that tree for, with a stick in its mouth to keep it open?"

"Sugar was brought home in it, and as it was pretty damp; it stuck to it so much that it could not be used for anything else, and I hung it there for the bees to clean it up. It is as clean and free from stickiness now as a new one. I put out some closet shelves, that had honey on them, that had oozed out of some broken boxes during the winter, for the bees to clean up, and had a lively time in consequence of it. Honey excites them more than sugar, and when it was gone they hunted for more. I had left a window open upstairs, and there were boxes of honey in the room. Hearing a buzz and a roar, we found that apparently a million bees were flying in and out of that window. I drove out what I could with a smoker, but had to put the window down, as so many came back, and it was two days before I got them all out. All this trouble on account of carelessness."

"Is that barrel of sugar, that the groceryman is rolling in, for the bees?"

"Yes, I'm feeding every colony I have. As I've not enough feeders to go around, I'm using all sorts of things—here is an old sugar bowl with one ear broken off, peach cans. Mason's jars, etc. I make little sacks of thin muslin, and tie them over the can, so that as fast as the syrup is eaten, the sack sinks with it. and not a bee will get drowned. I fill this large pitcher with sugar, pour in boiling water, and stir it well, and feed it warm; of course, not hot enough to burn them."

"Indade, ma'am, you've a dale of trouble with your baes."

"Yes, we can't have anything without work. I suppose St. Patrick had hard work to rid Ireland of frogs and snakes, but he succeeded."

"Won't you plaze give me a little honey for Paddy, he has a bad cough. God bless you ma'am."

* * *

Grafting Wax. — The *American Agriculturist* for May, gives the following receipe:

Rosin, beeswax, and tallow, are the essentials. Some use equal parts by weight of these; others prefer, as warm weather approaches, more rosin and less tallow. A good recipe is rosin 2 lbs., beeswax 1¼ lbs., tallow 12 ounces. These should be melted well together over a gentle fire, and stirred as the mixture cools. It is most conveniently used upon strips of cloth. Any old calico or muslin that will tear readily, may be torn into strips 2 inches wide, made into balls and soaked in the melted wax, until thoroughly saturated. We prefer to roll the cloth upon a short stick, to afford a handle. If paper is to be used, the warm wax is spread with a brush upon one side of this Manilla paper. Some grafters prefer a wax made with raw linseed oil, using a pint of oil instead of a pound of tallow.

* * *

☞ The Eastern New York Bee-Keepers' Union will hold their 10th Semi-Annual Convention on Tuesday and Wednesday, May 2d and 3d, 1882, at the parlors of the Hotel Augustan, Cobleskill, Schoharie County, N. Y., at 10 o'clock a. m. All interested in the bee business are invited to attend.

W. L. TENNANT, *Prest.*
C. QUACKENBUSH, *Sec.*

☞ The Champlain Valley Bee-Keepers' Association will hold their semi-annual meeting at Middlebury, Vt., May 11 1882. T. BROOKINS, *Sec.*

CORRESPONDENCE

For the American Bee Journal.

Producing Comb Honey—No. 5.

G. M. DOOLITTLE.

Having the bees all in, and swarming all done up, the next work is to manipulate the bees and boxes so as to get the largest possible yield from them. Now do not understand that I never have a swarm issue after I have all swarming done (as it should be when the honey harvest is at its best), for such is not the case. Some of the first swarms will frequently swarm again, or some of those which were moved so as to draw off the old bees, getting populous again, may swarm; but in such instances they are put back where they came from, after extracting every particle of honey from the brood nest, and cutting out all the queen cells. Still, as a rule, not many swarms issue after all are prepared as I have described. If a colony is determined to swarm after this treatment, I generally take off the boxes and put on a second story, filled with empty combs, in which case they will generally go to work with a will. If I cannot make one plan work, I try another; until I strike one that will, and if a colony is bent on swarming and will not work in a hive where the lower combs are filled with brood, I take all the brood away. Colonies having the swarming fever, will not do much of anything but swarm, unless some material change is made with the interior of the hive more than the cutting out of queen cells, and the sooner this fever is broken up (when it comes during a yield of honey) the better the results. However, but few bother in this way, as most of them settle down to business and stick to it after the swarming proper is over.

After the colonies are all made up, I see that all nuclei have the means of getting a laying queen as speedily as possible; then I am ready to go over the yard for box honey. In doing this, I remove the cap and unkey the cases, when they are pried apart a little in the center, blowing in a little smoke to make the bees run out of the way. As the bees clear aside I can see down the flat side of the sections and, if any are capped down to the bottom, they are ready to come off. If ready I pry the opposite side of the case lose, when the cases are spread apart a little and the one having the finished sections in it, is lifted out. I now smoke the bees off, in the manner I described on page 257 of the BEE JOURNAL for 1881, to get the bees off the brood combs. They can be nearly all shaken off, except a few behind the tin separator.

I then take the sections out of the case and place them in boxes which will hold 18 prize sections or 24 of the 1½ lb. sections. These boxes have nails driven in the bottom so as to project ¼ inch above the bottom of the box, and are so arranged, that, by beginning at either side, the nails strike close to one edge of the bottom of the sections, so their weight will keep them pressed close to that side, and then they will not be liable to tip over. The object of these boxes, are first, to prevent killing bees should there be a few not shaken off; secondly, to prevent the sections getting daubed, should any of the combs get bruised, so as to leak honey; and, thirdly, they can be packed nicely on a wheel-barrow so as to be wheeled to and from the honey house, as well as being handy to carry from the wheel-barrow into the honey room. Before going to the bee yard these boxes are filled with empty sections, having starters all ready for use.

When the full sections are all out of the case it is filled with empty ones, and put down at the side of the hive when more are taken in the same way, if any more are ready to come off. After taking all those finished, the rest are placed close together, and enough partly-filled sections from the sides are raised to the top (by lifting cases, sections and all) till the number wanted is reached, when the cases filled with empty sections are placed at the sides, in place of those raised to the top, when the hive is closed. I now place a small flat stone on top of this hive, that can be seen from any part of the yard, which indicates that I have taken the honey from it. Thus I keep on till the whole yard is gone over.

If the yield of honey is still good I work in the same way, going over them again a week later, except that this time the little stone is taken off and placed beneath the bottom board of the hive. By using this stone I can see, by glancing over the yard, just how far I have been each time, and the hives which have not been looked at.

As a rule, when I am ready to go over the yard again, the basswood yield is drawing to a close, so I work accordingly, by narrowing up the surplus room. As the cases are raised from the sides at this time, the follower is moved up, so as to shut the bees out of ½ the side cases, unless in case of some extremely populous colony, which is treated the same as before. By this means the working force is thrown into a more compact space, the result of which is, a tendency toward completing the sections they have commenced work in, rather than building comb in more. After another week I go over the whole yard again, this time shutting the bees out of the side boxes entirely, which throws the full force of bees into the top boxes, and, although the honey season may now be over, by getting this force of bees all together they will cap the partly-filled boxes, where they otherwise would not. This gives sections lighter in weight, but makes much more of our crop in a salable form.

At the end of another week, all the white honey is ready to come off the hives, and as a rule, my honey harvest is over. In seasons when buckwheat does yield a surplus, I seldom let the bees into the side boxes again, but keep them shut in the top cases.

Thus I have given you the way I proceed to get comb honey. By going over the yard once a week, the honey comes off with a whiteness of comb not attainable when left on the hives till the end of the season, as some do; and also the bees are kept working to their utmost capacity. Those who think they have a better way of proceedure, will doubtless think Doolittle does not adopt the best plan to get comb honey. I will simply say that an average of 92 lbs. each year, for each colony, for the past 9 years, is all I have to recommend this plan. This ends the production part of this series of articles.

Borodino, N. Y.

For the American Bee Journal.

Odds and Ends.

O. CLUTE.

Last fall I promised to report this spring my method of wintering, and its success. The winter has been so favorable that it required no skill to bring the blessed bees through all right. He who could not winter with success the past winter must be a poor bee-keeper indeed. A few of my bees were in chaff hives on the summer stands. All these have come through in good condition. The larger part of my bees were in simplicity hives in the cellar. All these are in good condition. Not a colony has been lost either out-door or in the cellar.

The first pollen was gathered Feb. 16. After several days of warm, beautiful weather the maples opened on that day, and the bees had a happy time; but the next day brought a frost that nipped the maples, and kept the bees in. Some of the coldest weather of the season followed. Since the middle of March the bees have been flying more or less every week. Maples, elms, cotton-woods, and box-elders have given pollen and some honey. To-day is clear and beautiful, with a still air, and warm sunshine. Willows are open, and I think some of the cotton-woods. The bees are very active, carrying pollen of a brilliant yellow, which I think they get from willows, and some of a darker color which I suppose comes from cotton-woods.

Although the winter has been very open, the clover seems not to have suffered. Already the white clover is pushing up its green leaves everywhere, and promises to be very abundant. The fruit trees are well laden with fruit buds, and if no frosts prevent, will give an abundant bloom. On the nights of the 10th and 11th inst. we had freezing weather, which is thought to have been a serious injury to the early cherries, but it is hoped that other fruits were not far enough advanced to be injured.

I hope other bee-keepers are more fortunate than I am in finding workmen who will make hives exactly right. The average workman seems to have no ability to conceive that ⅛ or ¼ of an inch is of any account in making a bee hive. They say that you are only "fussing" when you insist that every measurement shall be exact. I have been having a large number of new hives made, and have had my patience severely tried. I gave the workman at the factory a pattern hive which was just right. He rather elevated his nose when I urgently directed him to be sure to follow the pattern in cutting out stuff. But he made an exasperating blunder. I paid the wages of an expert carpenter to a man to nail hives, because I wanted the job done well and quickly. I showed him how, and then left him to do the work, and he did much of it badly. These workmen, and many days of cold or stormy weather, prevented me from sending bees promptly to some customers; but all will now go, and I hope will be all right.

Iowa City, April 17, 1882.

California Apiculturist.

The Hive I Use and Prefer.

WM. MUTH-RASMUSSEN.

After leaving Los Angeles, Cal., I commenced bee-keeping anew, and bought bees in frame hives, which, however, had not been made by a practical bee-keeper, and were therefore wanting in uniformity and relative proportions between the frames and their respective hives. The surplus frames were also of a different size from that of the brood frames. Having to make new hives, I considered that I might sometime want to produce comb honey for sale, and the 1 lb. section would be the most preferable package in which to place this article in the market. At the same time I knew, that on account of insufficient shipping facilities, general difficulty of shipping comb honey and probable future preference for extracted honey, my product for the present would be principally the latter article. Not liking the regular Langstroth frame, on account of its shape and size, and inconvenience in hanging it right side up in the extractor, I decided on a frame which would hold 6 1 lb. sections, instead of 8, and which therefore would be alike adapted to comb and extracted honey. I mean, of course, that the frame for comb honey should be 2 inches wide, and used only to hold the sections, while the frame for extracting and brood combs would be ⅞ of an inch wide, but the size in length and depth would be the same for both. The 1 lb. section is 4¼ inches square, outside measure. My frame made of ⅜ inch stuff is 8½x12¾ inside, and 9¼x13½ inches, outside measure. The top bar is 15¼ inches long, and the side pieces (8½ inches). are nailed between the top and bottom bars. I do not use the triangular comb guide, which adds only more work and expense to the frame, with comparatively little additional strength, but make instead (unless I use comb foundation), a thin comb guide of wax, painted into the frame with a small brush of feathers. This comb guide takes nothing away from the interior space of the frame, and I have never had the bees fail to follow it. I use 1¼ inch finishing nails for the frames; and have yet to see a frame come apart by ordinary careful handling.

My hive takes 10 of these frames, and is therefore 15 inches long from front to rear, 14¼ inches wide, and 10⅛ inches deep, inside. It will be observed, that there is an extra ⅛ of an inch in the depth, which I allow for shrinkage, after the hive is nailed together, and therefore make the space under the frames ½ inch. The entrance is in one of the ends of the hive, parallel to the frames, and is ⅜ of an inch high by 6 inches long. By arranging the entrance thus, I need only one division board to diminish the size of the hive for nuclei. Six-inch pieces of ordinary frame stuff are used to contract the entrances in winter, or for entirely closing them, when necessary. For convenience in moving, the bottoms are nailed on. A small board, 2 inches wide, six inches long in front and 11 inches behind, is nailed in front of the entrance, the nails going through the bevelled ends of the doorstep and driven only partly in, so that the doorstep can be easily taken off, when the hives are to be moved in a wagon. This hive has a capacity of 2,084 inches. It is otherwise made exactly like the style of Langstroth hive, introduced into Los Angeles county by Mr. John Beckley, and extensively used by bee-keepers there. The upper story corresponds to the lower, and takes the same frame, but for extracting I use only 9 frames above. My hives rest upon four small blocks, cut from waste pieces of scantling, and placed directly upon the ground.

It will be seen, that this makes a very compact, nearly square hive, easily made, convenient to handle, and with a shape and size of frame, which suits all requirements. If a honey rack is used, the hive will hold 21 1 lb. sections in one tier, and another tier may be placed on top by clamping them together. If wide frames are preferred, the upper story will hold 7 of these, containing 42 sections, and a brood frame or division board, inserted to fill the 1 inch space, left in one end.

Now I would not advise anybody already having an established apiary of uniform and well made hives, or of any certain style, used to some extent in his neighborhood, to change from what he already has, unless the demand and price for comb honey in 1 lb. sections should become such as to justify him in going to the trouble and expense of such a change; or unless he sees some particular merit in my hive over the one he is at present using; but to anyone making a start in bee-keeping, and having no particular favorite among the hives already in use, I would recommend my hive for consideration, and I seriously think that it fills the bill for a hive, suited to this climate and to the various purposes for which it may be used, better than any other hive with which I have become acquainted during my twelve years' experience in bee-keeping. I call it the "Three-Quarter Langstroth Hive," because the frames are three-fourths the size of the regular Langstroth, and it has already become the standard hive in this locality. No patent, gentlemen. Use it if you like, and criticise it, if you think it has any defects. Perhaps you can thereby help me to improve it in some particular, which I may have overlooked.

Independence, Cal.

For the American Bee Journal.

Light or Dark Colored Italians.

O. O. POPPLETON.

I see that the old question of the relative value of light and dark colored Italian bees is again occupying the attention of the BEE JOURNAL. I think this is an important question to practical bee-keepers, and worthy of full and free discussion.

I think it is now conceded by the most of bee-keepers that the Italians are not a strictly pure race, but have a slight admixture of the German bee. This is not admitted by all, but from what I can learn I judge that a large majority of our best bee-keepers believe such to be the fact. The admixture, if any there is, seems to have been so far back, that the traits of the mixed race have become quite firmly fixed, yet not so firmly but what there is some variation in both markings and traits of character between different strains of Italians that are all as undoubtedly pure as any we have. My experience is that those bees that most resemble in appearance and color the yellow race, also possess in a greater degree the traits of character that are peculiar to the Italians, and in this particular I agree with Mr. Heddon's latest writings, in which he says: "The dark Italians and hybrids possess some traits of the German bees, that the lighter Italians do not.

There are at least three traits that all writers on bee-culture agree the Italians possess in a greater degree than do our common bees. These are, 1st. Being lighter in color, the queen is more conspicuous on the combs, and therefore easier to be found, saving both time and labor in certain manipulations of the hive. This is of more practical importance than some think, especially in large apiaries where the bee-keeper has all the work he can do, and time is valuable. 2d. More inclined to defend their stores when attacked by robbers, or infested with moth worms. This trait needs no argument to prove its value, but I cannot say the difference in this is very marked between light and dark Italians. 3d. More inclined to cease other operations in the hive, and fill their brood combs with honey whenever the flowers are yielding largely. This is the most important trait of all.

I have of late years raised such a small amount of box or section honey, that I cannot say from experience whether they are less inclined to store honey outside of brood chamber than are the black bees, but a large number of our best comb honey raisers say such is the fact.

As some are aware, I run my entire apiary for the production of extracted honey, and the kind of bees I want are those that will give me the largest amount of that kind of honey, and yet not be deficient in vigor, hardiness, or ease of handling. In this section flowers usually yield very copiously for a short time, then partially cease for a time, then give another large flow, and so on. During the season of 1879, white clover yielded good for about two weeks, then ceased almost altogether, and about the 20th of August buckwheat gave a large yield for a week or ten days only. During all the rest of the season, just enough honey was gathered to keep brood rearing going on nicely. Now, I think all can readily see that those colonies of bees stored by far the most honey that partially ceased brood rearing during these flows, and bent their whole energies to the storing of honey, and this rule of course works to a greater or less degree every season. Nearly all bee-keepers desire to have their queens raise as largely as possible of brood during all times in the season, but I want queens that will be very prolific at all times during the season except during heavy flows of honey, and then have their progeny fill their combs with honey as quick as they can. It is my business to see that the combs are emptied often enough to allow her majesty a fair chance to perform her special duties. I have carefully observed this matter for years, and have no hesitation in saying that the colonies containing my extra prolific queens have not averaged so large a yield of honey as have those not raising so much brood.

As I have already said, the more my bees have shown by their color and markings their affinity to their yellow progenitors, the more thoroughly do they seem to possess those traits I have mentioned, especially the first and third ones.

Some make the claim that the yellow bees are not so hardy as are the dark or leather colored ones. Now, really, I don't like to be disrespectful toward anyone's opinion, but I really do think all such talk is simple bosh and hardly worth arguing.

I cannot say from experience how much truth there is in the claim of Messrs. Heddon and others that the German bees store more readily in sections than do Italians, but certainly do not doubt but such may be the fact, and can very readily see that for their purposes the dark Italians or hybrids might be much preferable. If their claims are correct, then it seems that the different management adopted by different bee-keepers is the real cause of so much difference of opinion among the most practical men we have in our ranks, as to the relative values of light and dark Italians.

I do not wonder at all that Mr. Buchanan, as well as others who have bred entirely for color and nothing else, made miserable failures. I only wonder that they attribute their failure to their bees, instead of to themselves, where the blame really belongs. I think if a judicious breeder will select the best of his light colored colonies to breed from, he will not have to report a failure.

I see several lay a great deal of stress in having or going to build up a special strain of hybrids. Now, gentlemen, have you looked this matter over carefully in the light of experience gained by men in the breeding of other kinds of stock?

Their experience proves that it takes a great many generations, dozens at least, and very great care and judgment in selections, before a strain can be built up from two different breeds containing the best qualities of both, without the poorest of either, and those desirable qualities permanently fixed. In my humble opinion it would take at least half of an ordinary life time, and the use of a sure method of controlling fertilization, before a valuable fixed strain of hybrids can be obtained.

I make a special business of bee-keeping; everything else, even my farm, being side issues, and I several years ago decided that I could succeed better by confining myself to one branch of bee-keeping, letting all others alone. I have therefore devoted my entire attention to the production of extracted honey, and have steadily refused to be drawn into the queen rearing, bee-selling, or supply-dealing branches of the business. The opinions I have expressed are therefore those formed while engaged in the one branch of bee-keeping named.

Williamstown, Iowa, April 10, 1882.

* * *

For the American Bee Journal.

Chemical Properties Required in Soil.

A. R. KOHNKE.

On page 389, vol. 17, of the BEE JOURNAL, a German bee-keeper in the *Bienenvater* is giving his experience as to certain elements necessary in the soil, to cause plants to yield honey. Special mention is made of nitrogenous compounds and lime, but that buckwheat would yield an abundance of honey on rocky soil. But other agents may be present in such a soil, which are the main cause of a profuse honey flow, to discover which the bee-keeper who intends to plant for honey would have to experiment, to find out whether it does or does not pay. By the word "experiment," I mean for the bee-keeper to find out what fertilizer is wanted to give his own soil the quality of causing plants growing thereon to yield honey. M. G. Ville, a French experimenter, makes this statement in his fifth lecture: "If the agriculturist desires to restore sugar to his beet root, he must supply the soil with potassa," Potassa or potash in the most available form is found in wood ashes. If this plant food is absent, all the other agents present will not be of much avail. Experiments which I am about to make next summer will hold good only to soil at my disposal, which is a rich, sandy loam, hence not conclusive for any other part of the country or even this county.

Now as to the question whether or not it will pay to raise plants especially for honey, depends altogether upon circumstances. In one of my late articles referring to a German writer, who thinks that it pays to raise them, instead of potatoes, I expressed my doubt as to its being a good investment, though a correspondent of the BEE JOURNAL makes me say the very opposite. Where land is worth from $500 to $1,000 per acre, as it is here, and the profits of market gardening are from $300 to $500 per acre, it would not pay. But lands worth from $10 to $30 per acre, which do not rent for more than $1.00, or at most $2.00, per acre, would pay better in honey plants. Some years ago I saw in the State of New York a field of potatoes, where two men had worked digging them a half a day; the proceeds were not quite a bushel; the owner abandoned the task of harvesting them. On the other hand, I have seen fields yielding 300 bushels per acre, selling at a dollar per bushel. Where it will pay under all circumstances, is in waste places, such as are not or cannot be cultivated; but, do not plant a little of everything and not much of anything; that is poor policy.

In gathering honey bees do not visit different kinds of flowers in one trip, but gather honey from one kind of flower only; if they are obliged to fly long distances to find them, they lose much valuable time in getting a load; if a bee-keeper wishes to try different kinds of honey plants, the seed of each kind should be scattered as near in one spot as possible; this will not only be an advantage to the bees, but to the bee-keeper to facilitate the observations he should make, to discover their value in his locality.

Youngstown, O.

* * *

For the American Bee Journal.

Bee-Keeping in Sweden.

T. G. STALHAMMAR.

In Sweden, last year was a very bad and trying one so far as concerned apiculture. No honey, but few swarms, and no possibility for them to build up or store honey for winter, except by giving foundation and using feeders. This I have been doing, and must feed every colony eight pounds of loaf sugar, at the entrance. Last winter (1880-81) was a very trying one for the bees as well as for mankind in this country, the thermometer sometimes showing 30° C. I saw a colony which took up its abode in a pillar or column, the cavity being one foot square, made of four boards 1½ inches thick, nailed together, airy and windy all along for 9 feet. It was covered up and downward, but insufficiently, the bees having easy access upward, as well as wind and rain. The bees had built their combs nice and straight 2½ feet long, which were well stored. Our examination was made in April, when the winter had passed, and they were found in very good condition. After a month had passed they were destroyed by mice.

During the autumn of 1880 I purchased some late swarms in skeps, and had no opportunity to transfer them into hives. I gave them sufficient food, and as an experiment, cut off a *corda* (one twist) of the round bottom-board 1½ inches high. My bees are wintered on the summer stand, but in some way or other protected. These colonies lived through. In hives with contracted entrances, but otherwise in fair condition, the bees were wet and died.

As an anomaly, I will mention that *Tilia Americana*, in the horticultural garden of this place, was in bloom as late as Sept. 14, last. Does it ever bloom so late in your country?

I am much pleased with the Weekly Bee Journal. I expect and long for each number in advance. The contents are such that nobody can justly ask for better and more honest information, and for the future I will never be without it.

Gothenbourg, Sweden, Feb. 1, 1882.

[Mr. Stalhammar is editor of the *Swedish Bee Journal*, and his letter will be read with interest. We have never known *Tilia Americana* (linden or basswood) to bloom so late as Sept. 14.—Ed.]

For the American Bee Journal.

Bees' Tongue Register.

J. H. MARTIN.

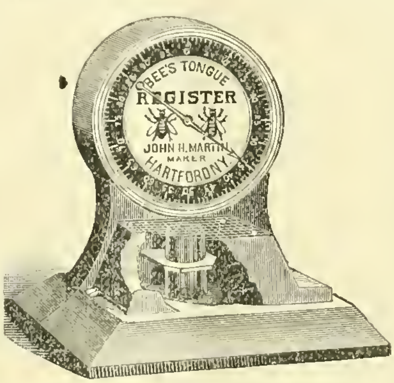
In the spring of 1881 I obtained a few colonies of black bees from a neighbor, and when red clover came into bloom I observed black bees at work upon it, and but few Italians. I wanted some instrument to test accurately and quickly the tongues of those twenty colonies of black bees, and find if possible where those long-tongued fellows lived. I made a self-registering instrument with a float to operate the pointer upon a dial, but I could not depend upon it for accurate measurement, for every time I filled the reservoir I would get honey or syrup, the specific gravity of which would be different from that previously used, and my float would not give accurate readings on the dial. I did not make much use of my instrument upon which I had spent much time in experimenting, but still kept thinking I would like an accurate instrument for the purpose.

When our National Convention came off, I was interested in finding that Prof. Cook and Dr. Brown had been experimenting in the same line, and Dr. Brown seems to have made his float and dial work to his satisfaction, but he recorded only 32ds of an inch.

I then concluded to let Dr. Brown or Prof. Cook do the measuring of tongues and give us an instrument; but soon after the idea came to me with this question, why not let the bees take the honey from a tube, and afterward measure? I soon answered the question with a practical instrument with which I could measure to a hair's breadth. I knew that bee-keepers would not be satisfied with 32ds, so I made my instrument to record by 100ths and one 400ths or even higher, can be registered by reading between the inches. It will measure the tongue of any insect that will empty the tube to the depth of 1 inch. Here now is a chance for *Apis dorsata*.

To operate the instrument, turn back the corner upon which the wire-cloth is attached, fill the glass feeding tube there found with any sweet liquid the bees will take, give the bees access to it whose tongues you wish to test, until they remove all they can reach. Remove then, and sit upon a level place and uncover the tube, turn the thumb-screw upon the back of the instrument until the ring that encircles the tube is on a line with the extreme upper surface of the honey. The pointer will now register the length of tongue upon the dial in 100th parts of an inch.

Although it is early in the season in this locality to measure tongues (our bees being in the cellar yet), I have tested a few, and find that they do not empty the tube so far by several 100ths as they do in the height of the honey season. I also find that the mesh of the wire-cloth makes some difference. It should be so as to let the mandibles through. I find 3-32 of an inch mesh gives the best results, and use that size.



Hartford, N. Y.

For the American Bee Journal.

Improvement in Italian Bees.

O. H. TOWNSEND.

Can they be improved? I answer, yes! Now the question, how? I will try to answer the question, endeavoring at the same time to give proofs which have been brought out by long experience, I having made bee-keeping a specialty for 17 years, and having had the Italians 14 years.

First, we must have a queen whose progeny is of good disposition, whose markings indicate absolute purity, which winter well, and last, but of the greatest importance, they must, as honey gatherers, have no rivals, not only in filling combs which are given them, but they must go into the honey boxes with a "rush" as soon as there is honey in the flowers. If all queens are reared from such a queen, and reared with the proper care, no one can fail to see good results. There may be some queens which will be an improvement over their mother; when this is the case, then such should be used from which to rear our queens. If the foregoing directions are followed up for a few years, there will be a very marked improvement. Instead of having some colonies which will store in a season 200 lbs. surplus, some 100, and others little or none, they will show that there has been some care used on the part of the apiarist in his choice of queens from which to rear the young queens.

Until within the last few years any one might have come into my apiary and found, at the end of a good honey harvest, some hives with a good yield of box honey, others medium, and some with none, or perhaps with a very little; but since I have followed the above rules to the letter for the last 4 years, it is different, for now my bees will go into the boxes to work at about the same time. There is no more necessity for keeping poor bees than for the dairyman to keep poor cows. By the way, poor cows can be sold for beef, but it would not pay to sell poor queens, but kill them and supply good ones in their stead.

I bought my first Italian queen 14 years ago. Her bees were gentle, and good to store honey in finished combs, but very loth to work in boxes. I reared my queens from this queen and her progeny for 8 or 9 years, during which time I never succeeded in getting them (the bees) to work in boxes to my satisfaction. Four years ago I received my first imported queen. Her progeny were well marked Italians, rather dark in color, No. 1 bees to handle, more hardy than my first Italians, and good workers for both comb and extracted honey. After using over 100 of her queens, I found a few of her daughters were more profitable than their mother. In 1880 I bought two imported queens. The first one produced hybrids (I do not know whether she ever crossed the ocean or not). I only reared one queen from this one. Her progeny were noted for long stings, and a good knowledge of their use. The other was a young queen. It came direct to me from Italy. This queen, which I now have, is the best imported queen I have tried. Her bees are well marked (not light Italians), and good-natured. I never knew them to sting any one, and I never saw their equal to work in boxes. They stored and sealed 90 lbs. of honey last season, all from the first crop of red clover, and cast a very large swarm. I also took several full combs of hatching brood during May and the forepart of June. They are sure to have a large supply for winter in the body of the hive. Wintered out-of-doors last winter in a box with 3 inches of chaff, and did not fly for over 5 months, and came out in the best possible shape. As yet I have failed to get a queen to beat her except for size.

I am thoroughly satisfied that if all

the poor queens are weeded out, and good ones introduced from such stock as described above, thereby insuring good drones, then the reports from all our different colonies will be uniformily good.

I see that Mr. Henry Alley advocates the yellow drone theory; but I must say, since following the principles given above, my drones have lost their bands of yellow. When I had the most hybrids I had the most yellow drones. I do not wish to convey the idea that yellow drones are an indication of impurity, for I am well aware that we may breed for such drones with success, and yet keep our stock pure.

In regard to the new races of bees, I think that if we have our Italians bred up to a high standard of excellence, we had better be slow to introduce new blood into our apiaries. From past experience I say, good-bye hybrids.

Kalamazoo, Mich.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

April 29—Muskingum Valley, at Berlin Center, O.
Leonidas Carson, Sec., Frederick, O.

May 2, 3—Eastsrn N. Y. Union, at Cobleskill, N. Y.
C. Quackenbush, Sec., Barnesville, N. Y.

11—Champlain Valley, at Middlebury, Vt.
T. Brookins, Sec., East Shoreham, Vt.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

◆

Saunders County, Neb., Convention.

The Saunders County Bee-Keepers' Association held their semi-annual meeting at Wahoo, Neb., April 1, 1882.

After the usual business had been transacted, the following subjects were discussed:

What is comb foundation, and how made? Can bees be fed too much early in the spring?

Spring dwindling, and how prevented.

Extracting honey and extractors.

What plants to raise for bees to work on.

The Association decided to hold a special meeting about the middle of June, at some one of the apiaries near by. Considered a better place to discuss the subject of bees than in town.

The report given showed that of 82 colonies put in winter quarters, only 8 were lost, and only 5 by wintering.

The meeting then adjourned.

Mrs. C. L. Stocking, *Sec.*

Michigan Farmer.

Eastern Michigan Convention.

The Eastern Michigan Bee-Keepers' Association held its second annual meeting in Detroit, April 11, President Pierce in the chair.

He delivered a brief congratulatory address, in which he commented upon the growth of the Society. One year ago it had been formed under discouraging circumstances; an unusually hard winter had just been passed through, and a majority of the bees in the country had been killed. This spring our bees are all in good condition, and the prospect good. The Society has increased in membership, having drawn to itself apiarists from distant parts of the State, and from Canada.

The subject of raising queens occupied a good deal of attention.

Messrs. W. Z Hutchinson and J. H. Robertson, both extensive breeders, detailed their experience, and gave many valuable hints. The fact was brought out that as good queens can be produced by artificial stimulation, as those reared during a honey yield; also that the color of queens is in a measure decided by that of the honey upon which they are fed. The definition of a tested queen is one that produces three-banded workers. Mr. Robertson said that he is using some combs which are 25 years old, and finds them good still. For pasturage he prefers alsike clover and figwort. He purifies wax with salt or vinegar. Both these gentlemen use queen nurseries.

There was much interest taken in the honey market. Mr. Robertson sells his own honey, and last year he disposed of 20,000 pounds. He strongly advocated that honey producers deal as directly as possible with consumers. None of those present had ever known of honey being adulterated, and it was agreed that bee-keepers have no use for glucose. Mr. Hutchinson had tried feeding it to weak nuclei in summer, and he now believed that pure cane sugar is cheaper even at three times the price. Several members stored extracted honey in stone crocks and large tin cans, and kept them in a warm, dry place.

The following is from the question box: Which is the best sized frame for wintering?

Mr. Robertson believed that more depended on the bee-keeper than the frame; he commenced to prepare his bees for winter in the preceding June, and had them prepared for winter before it came. This season he had wintered 509 colonies out of 511, and had noticed that bees cannot go from one comb to another as easily as along the length of a comb.

What kind of bees are the best?

Most of those present believed that we would obtain the best results by careful breeding.

One member had tried the Syrians; he found them very good workers, also very cross.

It was agreed that Italians would protect themselves much better against moths than the blacks.

For winter packing, inside of the hive, the following substances were recommended in the order mentioned, fine, dry sawdust, planer shavings and oat chaff.

The meeting adjourned, to meet at the call of the Secretary, some time next October. A. B. Weed, *Sec.*

◆

☞ The Mahoning Valley Bee-Keepers' Association will meet at Town Hall in Berlin Center, Mahoning Co., Ohio, on Saturday, April 29th, 1882, at 1 p. m., sharp. All interested in the busy bee are invited.

Leonidas Carson, *Sec.*

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☞ The Bee-Keepers of Virginia and Maryland are invited to meet at the Court House in Hagerstown, Md., on April 20, at 11 a. m., to organize an association. D. A. Pike.

SELECTIONS FROM OUR LETTER BOX

Cool Yet.—The weather is cool here yet; I took my bees out of the cellar two weeks ago to-day; put in 45 last November, and took out 42 colonies alive, with about one-half in very fine condition, the balance thinly settled. 1. The three lost had no bees either dead or alive, can you assign a cause? They also had consumed more honey than those coming through all right. Nearly every colony has three to four frames of sealed and candied honey to spare. 2. How can I get it out.

D. H. Hopkins.

Bear Lake, Mich., April 15, 1882.

[1. The three colonies mentioned were probably queenless, and the bees deserted and doubled in with other colonies. Sometimes when stronger colonies rob weaker ones, the bees being robbed go out with the robbers, or force an entrance to other colonies.

2. We would recommend to shave off the cappings and put the combs one at a time in the center of the brood nest. The bees will take out the honey, and liquefy and replace it in other combs. The following method is that adopted by Mrs. Harrison:

The honey was mashed up in a pan, and set over a kettle of boiling water, and stirred frequently. Before the honey was very hot, the wax had risen to the surface, and being set out in the cold, quickly congealed, so that the warm honey could be poured from under it, through a coffee strainer into another vessel, leaving the wax in the pan. After the honey was melted, the wax was all melted up together, and considerable honey of inferior quality was under it, which can be kept separate and be used for cooking, making gingerbread, etc. The rinsings of vessels used in manipulating the honey, will make excellent vinegar. The wax can be melted in a pan over boiling water, and should be poured, when melted, through a hot coffee strainer, and when cool, will be of a light straw color.

Frost and Swarms.—This morning when I arose I thought of the frosty mornings of November. The ground was white with frost. About 10 o'clock I was in the apiary listening to the merry hum of the beautiful Italian bees, when, to my surprise, a swarm came rushing out of the hive as if some one had cried fire. As I clip all my queens' wings, of course I had no trouble in hiving them. I had the job about completed when the second came. I began to think I was employed for the day, if it was Sunday. The first swarm weighed 9 lbs., and the second 8 lbs. This sounds a great deal like a whopper, but it is true, nevertheless. I have a hive of Italian bees that are in good condition, plenty of brood, and the queen was hatched the 15th of June, 1881. They are not populous enough to swarm. They built a queen cell, and she hatched the 4th of April. They killed her immediately. To-day they have two more queen cells about ready to hatch. What is the matter? They are not ready to swarm; they have plenty of room yet. The queen is young and prolific. J. F. KIGHT.

Poseyville, Ind., April 16, 1882.

[The bees are determined to supersede the queen—why, you will have to ascertain from future observations.—ED.]

Queen Feeding a Drone.—I have never seen a queen bee embrace a drone, but I have seen a queen feed a drone. I once was exhibiting bees at a fair, and for the purpose of giving more interest to my enterprise, I took the queen out of the hive and placed her with a drone in a small paper box covered with glass, so that they could be seen. I put a small bit of candy in the box, thinking they might want to eat. I was much surprised to see the queen suck the candy, and then go to the drone and go through all the motions that bees do in feeding one another. This she repeated several times. The drone soon died. They had not been in the box but a short time. We are having quite a cold spell here. Fruit must be greatly damaged. I never had bees winter better, and do better, than they are doing now. No sick bees this spring.

Waveland, Ind. ISAAC SHARP.

Loss About Ten per cent.—My bees have come through the winter very strong, with only the loss of one queen, and one drone-laying queen. I started in the winter with 15 colonies packed in chaff. Have to-day 13 in good condition, and two queenless. The loss in this neighborhood is about 10 per cent. We have had a favorable spring but to-day (April 10) is a cold, blustry day. P. A. RIEGLE.

Arlington, O.

Prepared for Dividing.—Thinking you would perhaps like to hear from this region in regard to bees, I am at liberty to say my bees wintered unusually well, 5 colonies of Italians, and are now very strong. On last Saturday and Sunday (Easter) one colony in particular showed its strength in laying out, and I think it would have swarmed on Monday last, only that the weather on that day turned suddenly cold, and has remained so until now, which had the effect of keeping them very quiet. I had all my preparations made for dividing them, but the weather interfered. 1. Do you think this cold snap will injure the brood? 2. What is the significance of finding, in the morning, say from 20 to 50 little round caps of wax at or near the entrance, which look like cell cappings? 3. Do you think it would pay for me, only having a few colonies of bees, to invest in a honey extractor, when prices remain so high?

HERMAN KNIRIHM.

New Albany, Ind., April 15, 1882.

[1. Where colonies are somewhat weak, the late cold snap will be found to have done considerable damage.

2. The finding of the little wax caps signifies, generally, that bees are uncapping honey preparatory to carrying it to the center of the brood-nest. In other words, that they have been obliged to resort to their reserved stores.

3. If you purpose remaining in the business, you may find it economy to obtain an extractor, because an exigency might arise for its use.—ED.]

Water! Water!—We in the Tiche country—east side—are under water, 3 to 20 arpents (arpent 192 feet) from the bayou. My father's place is 25 arpents, and the water from the bayou is under the house, and 20 feet above low water. Our bees are still 2 feet above water, 2½ to reach hives. April 1st we extracted 12 lbs. from 1 hive; April 8th 15 lbs. from another, to give room. We have 20 with second stories all nearly full. We could extract 500 lbs. to-day from all. We have 5 that are about ready for second stories. Ten days ago a swarm of black bees came to us. We gave them a home and put them to work. An actual inspection of all colonies shows no queen cells started. We have a sad record for others of your subscribers. Mr. Garrett has lost by water 50 colonies—has 30 left. Mr. Henry Steckler is in water, 3 miles to land, and his 140 colonies are *quien sabe*, in the garret of his house. We think he is equal to the emergency. We cannot get any news of him. There is not enough cane left from the lands not overflowed to plant ¼ of the land (now planted and under water) next season. Forty arpents of corn and cotton planted and up, do not remain, and the water is rising in the bayou 2 inches in 24 hours. Back the water is at a stand to-day. Since 6 p. m., April 2d, the water has risen 28 inches; April 1st, 11 inches; March 30 and 31, 11 and 13 inches respectively. You will know the extent of the disaster when I state the crop of cotton at 1.500 bales, sugar 1,700 hhds., molasses 2.000 bbls., in 1881. Worms follow overflow to cut down corn, worms eat the cotton, cane is killed. We are simply done for. Well, we are in a bad fix—sickness will play havoc, and run riot here this fall. My father's large practice here will be charity for a year to come, and losses—many due for four years—will be $20,000. Well, we will bear it, and make our bees educate us; you will see if they do not do it!

J. W. K. SHAW.

Loreauville, La., April 9, 1882.

Not Very Plain.—In the BEE JOURNAL of April 12, page 226, you give directions for rearing queens, and say, when all is finished to shake the bees in front of the new hive, and place the frames in the hive removed (the black colony), then release the queen. Do you mean to release the queen in the new hive, or return her to the hive removed 4 or 5 rods distant? Please make this plain through the JOURNAL. I think I understand the rest. I have never tried to rear queens yet J. HAMBLY.

Stirton, Ont.

[Return her to the hive removed (the black colony). The object in caging the queen is to have an absolute certainty that she does not get into the new hive on the old stand, and that is quickest guarded against by caging her.—ED.]

Fruit Blossoms All Killed.—We had splendid weather from the first of April until the 10th inst. Peach, apple, cherry and pear trees were in bloom, and the bees had a good time and gathered pollen and honey in abundance; but on the night of the 11th the wind changed to the north, and was accompanied by a heavy snow storm. From that time up to date we had heavy frosts, killing all the bloom, and bees have had no fly up to date. The indications are that we will have a change by to-morrow. Bees are in good condition, however, full of brood and honey. We hope that we will have a good honey harvest this season, although the fruit bloom was killed. Our Association in Franklin County, Ind., will meet on the last Saturday in April, to adopt a constitution and by-laws, and I think we will make a grand success of it.

J. W. STURWOLD.

Haymond, Ind., April 17, 1882.

Jubilant.—To-day bees fly nicely, after some cold weather. I finished taking out my bees April 4, the last having been confined 5 months lacking a day. Out of 177 I have lost only 1, and that was put in weak and queenless. Throwing up hats is in order. Cherry blossoms killed, but we can feed at that time and apples will soon bloom. C. C. MILLER.

Marengo, Ill., April 15, 1882.

The Golden Bee-Hive.—Bees in this neighborhood appear to be doing very well at this time. I examined one on the 22d of March, which had plenty of old sealed honey, with fresh honey and brood in all stages. 1. Can I feed extracted honey at any time to the bees, and have them store it without waste? 2. Will they take up extracted honey and store it in the boxes, when they are at work in the boxes above. I am afflicted with cataract on both eyes, so it is with difficulty I can see to read or write, hence I can be but a very poor bee-keeper. I think I will take my 15-year old boy with me, and try to use his eyes with my brains, so that between us both my pets may be taken care of the best I can. I keep but few, but I am loth to give them up, and will not as long as it can be helped. Just at this time this part of Alabama is blessed (or cursed) with a patent right bee-hive vender, selling rights to the people to make what he terms the "golden bee-hive." I have seen the hive and think it to be a sorry affair. Do you or any of your readers know anything about it? James B. Pickerell is the name of the vender. 4. Who is he?

W. E. FREEMAN.

Olustee Creek, Ala., April 13, 1882.

[1. Bees will not take up extracted honey and store it without considerable diminution.

2. In time of scarce honey flow, the bees will store extracted honey in the sections, where already at work in them; but in time of an abundant honey flow, they will look upon extracted honey with indifference.

3. The "golden bee-hive" was patented by David Thompson. We obtained from the Patent Office in Washington, in 1880, an official copy, from which we extract:

> What I claim as new, and desire to secure by letters patent is: The combination, with the hive proper of the supplemental hive or box B, feed-board A, feed-cup C, and key and lever E, all arranged substantially as described and shown.

The patent does not cover the hive proper (brood chamber), nor the frames or division board. Mr. Thompson only claims the "combination" of his surplus arrangement with the hive proper. This arrangement consists of small frames of the same length of the brood frames, but about ½ their depth; these hang by the top-bar, over the brood frames, and both the frames and their manner of hanging, together with their position on the hive, are all old, and have long been common property. The "combination" which Mr. Thompson claims is simply the attaching of his "supplemental hive, or surplus box, to "the hive proper," and he has no claim upon any movable frames, or any of the desirable features of the ordinary hives, or upon division boards. His "feeder," "key" and "lever," are the main points in his patent, and these are, perhaps, of the least importance to bee-keepers.

4. We do not know Mr. James B. Pickerell.—ED.]

Planting for Honey.—You have raised such a tempest in my brain about planting for honey, that I resolved at once to set apart 20 acres adjoining my apiary for that purpose, and wrote to the editors of the *Kansas Bee-Keeper*, asking them to open the question, "Is planting for honey needed in Kansas; if so, what, how, and when shall we plant?" I expect a notice in the next issue. I shall not be able to plant the whole patch this year, but I would like to ask for the proportion of seeding for such a farm, on the supposition that my bees had no other resource—perhaps your pamphlet on planting answers my question. My land is a very fine, deep, rich, black loam, rectangular in form in the proportion of 4 to 9. Many thanks for the weekly visits of the BEE JOURNAL. I once heard an elderly gentleman advise a young man in the following words: "Go, and make yourself indispensable," were you there at the time?

Exeter, Kans. N. EMMERSON.

[We think you will find your question answered more satisfactorily in the pamphlet, "Bee Pasturage a Necessity," than we could do in a newspaper article.—ED.]

Grateful.—I am a bee-keeper in a small way, compared with some of our American apiarists, and depend a great deal on the BEE JOURNAL and its correspondents. I desire to return my thanks to Rev. A. Salisbury and Mr. G. M. Doolittle for many valuable suggestions. The latter just strikes me exactly. I like to read articles that come right out and tell me what to do—that is business. The Syrian bees are beauties, what I have seen of them, and I think ought not to be classed as ferocious. There are about five apiaries in our vicinity or the north half of our county (Douglas), all run for comb honey, except Mr. Salisbury's, which is partly run for honey and partly for queens. The five apiaries contain about 440 colonies, 70 of which are my own. These were wintered in a cave without loss. My yield in 1881 was about 50 lbs. of comb honey per colony, in prize sections, and thirty per cent. increase. They filled the brood chambers in the fall to the extent of crowding out the queens, and consequently they are weak this spring. I am going to adopt Mr. Doolittle's plan with them, and think I will have about 55 colonies when united for clover honey gathering. Next fall they will have better attention, as I have resolved to devote my whole time to the production of honey. BARTLETT Z. SMITH.

Tuscola, Ill.

Honey Store-Room.—I have a two-story building 18x24 feet, and desire to use the upper story for a store-room, and the ground floor for work-shop and room to keep comb honey in. The honey room is at the west end and is ceiled up on the inside, and has racks to place the honey on. The room has but one window, and blinds will be placed on the outside with wire screen and curtain on the inside. Which would be the best for the good keeping of the honey, a dry ground floor or a plank floor? There will be a board chimney 10x12 inches from the honey room, with a slide to open or close the same, so that when the sulphur fumes have been on the honey long enough they may be carried off as soon as possible, so as not to settle down on the honey and color the comb. The chimney may also be used as a ventilator. Please state in the BEE JOURNAL what you think of the above arrangement for keeping comb honey. D. M. KETCHAM.

Arcadia, N. Y.

[If perfectly dry, we think we would prefer the ground floor, then with the chimney near the bottom for the escape of the sulphur fumes, your room will probably give satisfaction. —ED.]

Universally Cold.—I see by the BEE JOURNAL that most of our fraternity are having an early spring, and that bees are gathering pollen finely. Not so with me, however, for the spring has been universally cold. Vegetation has not started in the least as yet, and the past week has been one of cold and snow, the mercury going as low as 14°. It has been so cold I have been unable to dig plants except for about a week, making me late in filling orders, at which some of my Southern patrons feel disposed to growl a little. No pollen yet, and but very little brood in the hives. However, my colonies were never stronger in bees at this time of the year than now.

G. M. DOOLITTLE.

Borodino, N. Y., April 17, 1882.

Pollen.—It is supposed that bees feed their young ones on neither pollen or honey in the raw state, nor soften it, like pigeons do, for instance in the crop, and then feed; but that both pollen and honey are converted by them in chyle or milk, so to say, and then fed. Anyone who has tasted the stuff left in the queen cells will come to this conclusion. If, therefore, bees raise young ones in the spring without pollen, they do so at the cost of their own vitality, the same as animals live, which hibernate, but could never do it very long.

Terre Haute, Ind. T. HULMAN.

Bees Swarming.—Bees are in fine condition, and are swarming occasionally notwithstanding the cold wave which passed over our latitude during the past few days. The poplar, one of our chief honey-producing trees, is just coming into bloom.

S. D. MCLEAN.

Columbia, Tenn., April 17, 1882.

Removing Queen Cells.—In your recent directions on queen rearing, dividing, etc., you say, "in 10 or 12 days from the removal of the queen, the queen cells may be cut out and used." In "Quinby's New Bee-Keeping" directions are given to remove the cells in the latter part of the ninth day, or the early part of the tenth day, from the removal of the queen—that if put off later a queen will likely emerge and destroy the other cells. Now if such a thing should occur, of course our object would be defeated. On the other hand, I understand we run some risk of injuring the queen if cut out too soon, besides, when we divide, as you recommend, by supplying a colony with a queen cell, or cause the colony to wait unnecessarily long for a laying queen. Please answer: 1. Where no special combs are furnishad beforehand, what is the longest time we can safely wait after the removal of the queen, before cutting out the queen cells? 2. What age larvæ (dated from the laying of the eggs) do the bees prefer to use to rear queens? G. M. Alves.

Henderson, Ky.

[1. Twelve days; and this will be governed by the progress made by the bees in ripening the cell. To determine this, an examination should be made previously.

2. From three to five or six days. Usually about four. We prefer, always, to watch the development of the cells closely, so as to let the young queens be as thoroughly developed and vigorous as possible before removing or handling the cells. The best queens we have had were those from cells removed but a few minutes before hatching.—Ed.]

Plenty of Bloom.—We have plenty of bloom here, and bees are doing well. I want to know how to get the most honey, and hence I take the Journal. John Erwin.

Louisville, Ill., April 19, 1882.

Clover Uninjured.—Bees are well—only one colony has perished; but, best of all, the clover is uninjured by the open winter. The honey prospect is fine for 1882, in Michigan. T. F. Bingham.

Abronia, Mich., April 17, 1882.

Bees at the College.—The College bees are in splendid condition. I never knew bees to have so much brood at this time of the year, yet when I removed the bees from the cellar on the 1st of April, they had no brood, as there was no pollen in the hives. Bees here commenced to bring in pollen on April 1. This is five days earlier than any previous year. Possibly they would have brought it in earlier had they been able to fly. Our meeting last Thursday was very largely attended and was a great success. A. J. Cook.

Lansing, Mich., April 24, 1882.

Harmless.—I inclose an insect, and often see such around the hives. Do they do any harm to the bees? A Subscriber.

Navarino, N. Y.

[We have often seen them around the hives, as well as on flowers, attracted no doubt by the smell of honey. After much observation, we cannot accuse them of any harm, intentional or otherwise.—Ed.]

Cheerfulness Prevails.—The outlook for the California bee-keeper, up to Feb. 1, was indeed very gloomy, owing to the scarcity of rain. Since that date it has rained copiously, and the prospect for a good crop of honey, perhaps, was never better at this season of the year. Consequently, the faces of the bee-keepers have been transformed from a woe-begone expression to that of smiles and cheerfulness. You may prepare yourself for a good report from California this year, though let her crop of honey be what it may, we shall depend almost exclusively upon Europe for our market. There are parties here now making very liberal offers for the coming crop. J. E. Pleasants.

Anaheim, Cal., April 13, 1882.

Flowers on Every Side.—Bees are doing well here now, with some swarming going on. Poplar (tulip) is beginning to bloom, and raspberries will be due in a few days. I wish you could see our country now. All nature is green and fresh, with flowers on every side. W. J. Willard.

Jonesboro, Ill., April 17, 1882.

Cyprian Bees.—Having heard so much about Cyprian bees and their good qualities, I purchased a queen last season. I found them more gentle than the blacks, and better workers, but, when once disturbed, they are very hard to quiet down. All my black bees cannot rob them. On the 1st of April I made an artificial swarm by placing in an empty hive three frames of brood from the old one, then moving the old hive a good distance off and setting the new one in its place. By the 16th I took from it 15 queens and it swarmed once. I have left them 15 capped queen cells, hoping that they will swarm again. I think that they keep out moths better than the blacks. I expect to try the Italians next. D. R. Keyes.

Wewahitchka, Fla.

Bee-Pasturage.—Your pamphlet on this subject, Mr. Editor, is something which every bee-keeper needs. I have long been looking for such a work. I have planted different kinds of honey plants this season, and shall plant more in due time. We are having an early spring in Kansas. The fruit trees are in bloom, but the weather has been windy and cool, and we have had but few days when the bees could fly. The past winter was mild. E. Zabel.

Williamsburg, Kas., April 12, 1882.

Gnawing Off Combs.—I want to ask a question, and, of course, want an answer: I have one colony of bees, and know nothing of their habits. 1. I find that they are carrying out the comb; some frames are being nearly eaten off at the top. What makes them do so; and, 2. Is pure maple sugar good food for bees in spring? Bees have been gathering pollen for about ten days. Subscriber.

Fairchild, Wis., April 20, 1882.

[1. The combs are objectionable; we have known the bees frequently to gnaw off the cells of the combs when honey was candied very solid in them.

2. Yes, almost anything will do to feed in spring, when constantly flying, but, of course, good honey and sugar syrup are best.—Ed.]

Prospect of Honey Harvest.—My bees are stronger than I have ever had them at this season, before. I have had but one swarm yet and that was yesterday. I have been holding back my swarming for the ratan honey harvest. Several of my neighbors' bees have swarmed, which has proved very disastrous, as a genuine "Norther" blew up on the 11th inst., and the weather continued wet and cold four or five days, chilling the brood in the parent hive, and severely damaging recent swarms. It is warmer now and the prospect is for a heavy honey yield the coming season. Wm. R. Howard.

Kingston, Texas, April 17, 1882.

Bee Stings.—The remedy for the third class of bee-keepers, mentioned by J. Anderson, whom the stings affect so seriously, is bromide of potassium. With me, the pain is cured instantly by rubbing honey over a large surface about the sting, but all the symptoms that he mentions follow, unless I have this remedy at hand; then I am ready for work again in 10 minutes. M. Simons.

Brockton, N. Y.

Wintered in Cellar.—I wintered my bees in a well ventilated cellar and lost 11 out of 58 colonies. Ten of them starved. J. F. Powell.

Tracy, Minn., April 13, 1882.

Building Up.—My bees wintered without loss and are building up rapidly. W. H. Miller.

Berrien Springs, Mich., April 14.

* * *

☞ We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal.

* * *

☞ When changing a postoffice address, mention the *old* as well as the new address.

THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance. Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance :

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Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

For man it has no equal ; for beasts it is not excelled. What ? Kendall's Spavin Cure. 14w4t

The Apiary Register.

As the time is now at hand to commence the use of this valuable book, all who intend to be systematic in their work during the coming season, should obtain a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞ To any one sending two *new* Weekly subscribers for a year, we will present a volume of the BEE JOURNAL for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our *new* subscribers will be pleased to learn that they can get it for $1.00, by sending for it *at once*, before they are all gone.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00 ; or with King's Text-Book, in cloth, for $2.75.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., April 17, 1882.

The following are the latest quotations for honey and beeswax received up to this hour :

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 8c. for dark and 10c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax, on arrival ; 18@22c. for medium grade, and 15@17c, for dark.

AL. H. NEWMAN, 972 W. Madison St.

CINCINNATI.

HONEY—The demand for comb honey is slow, and prices nominal at 16@20c. on arrival. Extracted honey is in fair demand. Our jobbing prices for 1 lb. jars of clover honey are, per gross, $25 ; for 2 lb. do., per gross, $42. The demand for manufacturing purposes is very good. We pay 8@10c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Our honey market would be good, as there is considerable inquiry for white honey in sections, with none to satisfy the demand. It would bring 22c. readily for choice. Buckwheat honey, no sale. Extracted, 11@12c. per lb.

BEESWAX—25@30c.

R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—All reports from the honey-producing districts in the southern part of the State are of the same tenor, viz.: that there will be a heavy yield this season. Bees are having an abundance of flowers, full of sweet nectar, and are gathering large quantities of honey and making brood comb. Our quotations are mainly nominal, as there is little doing at present.

We quote white comb, 16@18c.; dark to good, 10@14c. Extracted, choice to extra white, 8@9c.; dark and candied, 7c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

CLEVELAND.

HONEY—The demand for honey is light, most of the trade finding fault with the best offered, as it is more or less candied. Values are not steady, prices being made to meet the views of the purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—Scarcely any demand reported for honey; prices weak and little more than nominal.

We quote as follows : White comb, in small boxes, 15@17c ; dark, in small boxes, 11@12c. Extracted, white, 9@10c.; dark, 7@8c.

BEESWAX.—Western, pure, 24@25c.; Southern, pure, 23@24c.

THORN & CO., 11 and 13 Devoe avenue.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—In fair demand. Strained selling at 8@10c.; comb scarce—nominal at 18@22c.

BEESWAX—Stiff at 20@21c. for prime.

R. C. GREER & CO., 117 N. Main Street.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club :

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

Bees and Honey, or Management of an Apiary for Pleasure and Profit. This is the title of our new book. The first and second editions having been exhausted, and being desirous of having it "fully up with the times," including all the various improvements and inventions in this rapidly increasing pursuit, we have thoroughly revised it, re-writing some chapters and adding several new ones, in order to present the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth 75 cents; in paper covers 50 cents, post paid. The following is its Table of Contents :

PAGE.
NATURAL HISTORY OF BEES 11
  Introduction 11
  The Races of Bees 13
  The Queen Bee 13
  The Drone Bee 16
  The Worker Bee 17
  Brood 19
  Production of Wax and Comb 20
  Pollen, or Bee-Bread 24
  Propolis, or Bee Glue 24
ESTABLISHMENT OF AN APIARY 25
  Situation and Arrangement 25
  Bee-Keeping a Science 25
  Who Should Keep Bees 26
  Suitable Location 26
  Which Way Should Hives Face 28
  When to Commence 28
  How Many Colonies to begin with 28
  Removing Bees 28
  What Kind of Bees to Get 29
  Buying Swarms 30
  How to Care for a First Colony 30
  Bees Kept on Shares 30
  Bees Marking their Location 31
  Changing the Location 31
  Will Bees Injure Fruit? 32
  Cleansing Combs of Dead Brood 33
  Ants in the Apiary 34
  Removing Propolis from Hands 34
HIVES AND SURPLUS RECEPTACLES 35
  What Hive to Use 35
  The Langstroth Hive 36
  Production of Choice Honey 38
  Single Comb Honey Sections 39
  One-Piece Honey Sections 40
  Cases for Holding Sections 40
  Making Hives and Surplus Boxes 43
PRODUCTION AND CARE OF HONEY 45
  Preparation for the Market 45
  How Should Honey be Marketed 45
  Assort and Grade the Honey 47
  How to Get Bees out of Boxes 47
  Management of Comb Honey 47
  Honey in Unglassed Sections 49
  Handling and Shipping 50
  Candied Comb Honey 51
  Management of Extracted Honey 51
  Honey Must be Ripened 56
  Metal Corners for Crates 57
  Putting the Glass in the Sections 57
  Honey as a Commercial Product 58
MANAGEMENT OF AN APIARY 59
  Luck or Scientific Management 59
  The Italian Bees 59
  Italianizing the Apiary 60
  Introducing a Queen 60
  Inserting a Queen-Cell 62
  Nucleus Colonies 64
  Dividing the Colonies 65
  Swarming; how to Control it 67
  How to Hive a Swarm 69
  The Loss of the Queen 69
  What are Fertile Workers 71
  Transferring from Box Hives 72
  Transferring from Frame Hives 74
  Uniting Weak Colonies 74
  Clipping the Queen's Wing 75
  Washing Out Drone Brood 75
  Removing Bees from the Combs 75
  Preparing Bees for Shipment 76
  Uniting Colonies in the Spring 78
  How to Separate Swarms 78
  Robber Bees 80
  Feeding Bees 80
  Quieting and Handling Bees 82
Management of an Apiary—Continued.
  Shipping and Introducing Queens 85
  Bee Dysentery 87
  Foul Brood Disease 87
HONEY EXTRACTOR AND ITS USE 89
  The Invention of the Extractor 89
  When to Use the Extractor 92
  How to Extract 93
COMB FOUNDATION AND ITS USE 95
  Invention of Comb Foundation 97
  Preserve the Wax 99
  Comb Foundation Not Artificial 99
  Fastening Foundation to Frames 100
BEE PASTURAGE A NECESSITY 103
  Trees for Shade and Honey 104
  Plants for Field and Roadside 108
  Plants for Honey Exclusively 115
  Honey Plants for Decoration 119
IMPROVEMENT IN BEES 131
  The Bee of the Future 132
  Lengthening the Bee's Tongue 133
HONEY AND BEE SHOWS 135
  Exhibitions at Fairs 135
  Effect of Bee and Honey Shows 138
THE WINTERING OF BEES 141
  Chaff Packing for Winter 142
  Preparing Cellar for Wintering 144
  House for Wintering Bees 145
  Wintering Bees in Clamps 146
GENERAL ADVICE TO BEGINNERS 147
  General Information Necessary 147
  Selecting a Location 147
  Plan for an Apiary 148
  Adopt a Standard Frame 149
  Keep an Apiary Register 149
  Increase by Division 149
  Artificial Swarming 152
  Preparing Feed 153
  Guard Against Overstocking 154
  Provide Continual Honey Bloom 154

Honey as Food and Medicine.

We have just issued a new edition of our pamphlet bearing the above title. It has been revised and enlarged from 24 pages to 32, the new pages being devoted to *new* Recipes for Honey Medicines, and all kinds of cooking in which honey is used.

It is undeniable that *pure honey* is the simplest, the healthiest, the most natural, and the most strengthening article of food for healthy persons, as well as the best remedy for the sick; and for the convalescent it is the true balsam of life, to restore them to their wonted strength and health.

What is needed is to educate the community up to this idea, and in no way can that be done so well as by directing their attention to the merits of honey.

This little pamphlet should be scattered by thousands all over the country, by honey producers. In this way it will *create* a home market in almost any locality.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

When 100 or more copies are wanted, they will be sent by express, at the expense of the purchaser.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

4 RACES OF BEES. 4
FREE TO ALL—
21ST ANNUAL CIRCULAR.
HENRY ALLEY, Wenham, Mass.
17wtf

1882. Consult your interest, and send for my new circular and price list of colonies, Nuclei and Queens. Address,
9sm8t **S. D. McLEAN**, Columbia, Tenn.

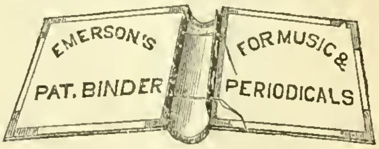
Italian and Cyprian Queens,

Imported and home-bred. Stock very superior. Also, hives of any of the leading patterns. State your wants and send for price list.
J. A. BUCHANAN,
17w2t Holliday's Cove, Hancock Co., W. Va.

Full Colonies of Italian Bees,

in the Langstroth frame, shipped in ONE-STORY SIMPLICITY HIVES, at $7 each.
15w4t **R. L. BARBER**, Bloomington, Ill.

BIND YOUR JOURNALS
AND KEEP THEM
NEAT AND CLEAN.



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I will sell the above at a bargain for cash, or trade for a small farm, or other desirable property. An offer for it is respectfully solicited. Address,
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An Apiary of **90 COLONIES OF ITALIAN BEES**, with buildings and all modern appliances for running the same; are within 23 miles of Chicago, in a splendid location for wild pasturage. These bees show a good record for last season—**2,064 lbs. comb honey from 43 colonies, and increased to 100 colonies.** They are in prime condition now, with

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FINE ITALIANS.

75 **Colonies for sale.** If you wish bees for work, send for prices.

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ONE-PIECE SECTIONS a specialty. Pound size, $4.50 per 1,000. L. Hives 50c. Also, Italian bees for $8 per colony. Circular free.
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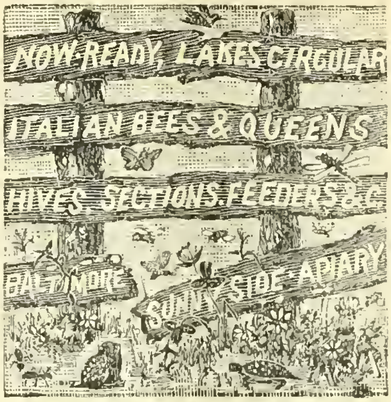

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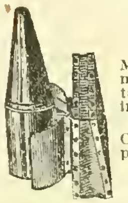

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1-frame Nucleus, with Tested Queen	$4.50
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Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
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Address, by Registered Letter or Postoffice Order,

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Circulars free. Address,
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Manufacturers of
Bee Hives, All-in-one-piece Section Boxes,
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Large Smokers need wide shields. Bingham's have them, and springs that do not rust an break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

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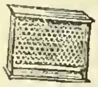

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Full Colonies, Nuclei, Tested and Untested Italian Queens, bees by the pound. I guarantee safe arrival. Address, **OTTO KLEINOW.**
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Two Apiaries for Sale.

Having purchased the Apiaries of A. T. Williams, in which I was a partner, I now offer them for sale. These apiaries are now divided, one portion of 150 colonies, are in Illinois, about 50 miles from St. Louis, Mo., and the remaining 250 colonies about 6 miles from New Orleans, La. Both Apiaries are in good honey locations, and the bees are in fine order. The Apiaries are well stocked with supplies of all kinds, with 100 new hives made of cypress lumber, and ready for bees when they swarm. The bees are all

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All the hives are the Improved Quinby, and thoroughly painted. The bees here were brought last fall. My reason for selling: Engaged in other business and cannot attend to them.

I will take for them $6.50 per colony net for all of them, or will sell in lots to suit purchasers for $8 net. I have on hand two honey houses, one foot-power saw, two honey extractors, all kinds of tools for apiarian work, 16,000 sections (one-piece), 125 lbs. foundation, and all the hives supplied with section cases all tinned.

This is **AN EXTRA BARGAIN** for a party or parties to invest in an enterprise of this kind.

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REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

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I have for sale about 40 Colonies in 10 frame Langstroth hives. All are in prime condition, and have young queens. Will be delivered after April 20th. Price, for Italians, $9; a few good Hybrids, $1 less. Satisfaction guaranteed.
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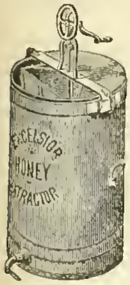
HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

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For 2 American frames,	13x13	inches	$8 00
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For 2 frames of any size,	13x20	"	12 00
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ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

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LULING, CALDWELL CO., TEXAS.

Breeder of Pure Italian Queens. I use one of J. H. Nellis' best imported queens. Tested Queen, $2.50 ; per half-dozen, $13.50. Select Tested, $3 ; per half-dozen, $16. No "Dollar" or nuclei-queens handled. Safe arrival and satisfaction guaranteed, if possible. 14w39t

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The manufacturers of Comb Foundation have advanced the price 2 cents per pound, owing to the increased cost of Beeswax.

From this date, and until further notice, the price of all the styles and kinds of Foundation, except the VanDeusen (flat bottom), will be

Advanced 2 Cents per pound,

from the advertised price in my Catalogue.

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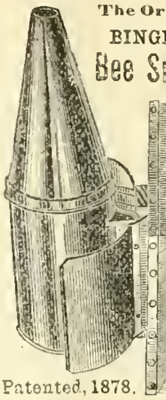
Who will be the first to copy?

25,000 IN USE.

The Original
BINGHAM
Bee Smoker



Patented, 1878.

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Wide shield Conqueror, 3 inch	$1 75	$2 00
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To sell again, apply for dozen or half-dozen rates.

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FULL COLONIES of ITALIAN BEES,

From my Apiaries.

QUEENS and NUCLEI IN SEASON.

☞ Satisfaction guaranteed. Circular on application.

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I desire to take about 10 strong colonies of Italian Bees to run on shares in the customary way, and invite correspondence to this end. I can care for them both in winter and summer, having a good place and pasturage.

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Of Lansing, Professor of Entomology in the
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320 Pages; 133 Fine Illustrations.

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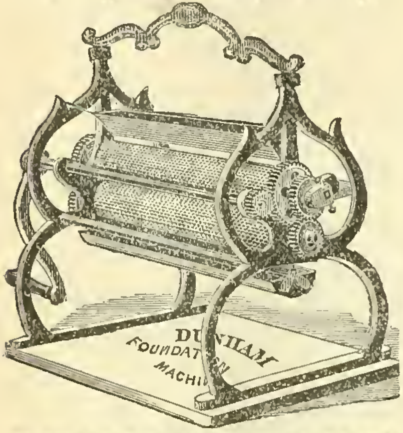

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I make a specialty of rearing pure Holy Land Queens, and have now more than 100 colonies in their purity. All Queens bred from D. A. Jones' Imported Queens. Dollar Queens, before June 20, $1.25 each; after that date, single Queen, $1.00; 6 for $5.00; 12 or more, 75 cents each; Warranted Queens, 25 cents more each. Tested Queens, $2.50 each; Italian Queens, same price.

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IN SIMPLICITY HIVES.

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THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

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TOPICS PRESENTED THIS WEEK.

Editorial—

Fraud in Food........ 273
Successful........ 274
Editorial Items........ 274

Among Our Exchanges—

Rules for Economic Apiaries Competition. 275
See that the Bees have Honey........ 275
A Bee Lawsuit in Germany........ 275

Correspondence—

My Reply to Mr. Heddon........ 276
Review of the Dzierzon Theory........ 277
Italianizing Cyprian Bees........ 278
Extracted Honey—No. 3........ 278
Rearing the "Best" Bees........ 279
More about Bellows Smokers........ 279

Convention Notes—

Local Convention Directory........ 280
Central Michigan Convention........ 280
Maryland, Virginia and W. Va. Convention 280

Selections from Our Letter Box—

Artificial Comb Honey........ 280
Glucose........ 280
Very Encouraging........ 280
Three Weeks Ahead of Time........ 280
Snakes Eating Bees........ 281
My Early Work........ 281
Judge Andrews' Lecture........ 281
Almost a Blizzard........ 281
Preparing Pasturage........ 281
Bee Notes from Kentucky........ 281
Care of Comb Foundation........ 282
An Error........ 282
The Industrial Exposition in Denver........ 282
Last Year's Record........ 282
Saw Palmetto........ 282
California Notes........ 282
What Hive to Use........ 283
First Experience with Italian Bees........ 283
Queenless Colonies........ 283
Dreary Outlook........ 283
Stray Swarm........ 283
Cold in Massachusetts........ 283

Business Notices—

Clubbing List........ 283
Premiums........ 283
The Apiary Register........ 284
Honey as Food and Medicine........ 284
Honey and Beeswax Market........ 285

Fraud in Food..

The Chicago *Tribune*, of April 23d, remarks under the above caption:

There is scarcely an article of food in the market sold for man's consumption that is not adulterated in some manner. From flour to candy, and from brandy to mixed pickles, the work of the adulterator is seen. Nothing is too large or too small for him to tamper with, and the only guard against this growing evil is the possession of a thorough scientific knowledge and a microscope. Scientists say that food adulteration is the worst evil with which sanitary science has to battle. Many of the states have tried to suppress it, and much has been written against it, but to no avail. Sloe leaves and sand still continue to reduce the purity of tea and sugar, and the boarder still revels in chicory, plumbago, Prussian blue, oleomargarine, starch, alum, burnt sugar, glucose, rye, beans, ground almond shells, salts of tin, gypsum, and enough of the insoluble to make a Pennsylvania goat die of indigestion in a week. Scientists divide adulterations into three kinds, fraudulent, deleterious and accidental. The latter, of course, scarcely enters into the question. It is said by the virtuous grocers that adulterated articles never reach even the medium class of customers, but are confined to the trade which demands, through necessity, the cheapest grade of goods. They say that a sufficient number of articles have been so reduced in price as to make adulteration unnecessary and impossible. This is denied, however, by a great portion of the people and by chemists, who say they are constantly analyzing specimens of adulterated goods bought from reputable stores. Each grocer has his own excuse, and they all generally lay the blame upon the wholesaler or producer. The farmers and millers are "out" a convenient distance, and, therefore, come in for their share of the responsibility. These parties in turn claim that their produce is adulterated by the middlemen, which class disclaim the accusation and give it to the dealers themselves.

Thus it is impossible to fix the responsibility upon any one class, and the people have their choice, if they wish to do anything in the way of anathema, when the almond-shell in the coffee swells the swearful yearn in the human breast. Legislation in this matter is next to impossible, because it is seldom that the complaining parties can trace their injury, if any, to the suspected article, and the case, therefore, goes by default.

Among the adulterations which are most common and most injurious is the practice of putting copper in pickles, lead in pepper, and poisonous colors in candy, the weakening of drugs, and, last but not least, the dilution of milk with water, thus weakening the food of children. The fraudulent adulterations are the most common, because legislation is powerless in their case. This last includes the mixing of low grades with the high grades of an article, such as flour, sugar, tea, coffee, oils and liquors, putting flour in mustard (after coloring it with tumeric), corn syrup and glucose into cane syrup, oleomargarine into butter, etc.

The accidental adulterations might possibly include sand in sugar and milk, dust in tea, and lead from mill stones in flour. Through ignorance, a "green" miller can spoil the best flour by running his mill stones too far apart or too close, or by the selection of damp grain. Tea brought by railroad from San Francisco, accumulates more or less dust on the journey, so the grocers say, but the railway men deny the fact.

The following list of articles is given, with the deleterious substances used to adulterate them:

Bread, alum, sulphate of copper; butter, copper; canned vegetables and meats, salts of copper, lead; cheese, salts of mercury in the rind; candy, poisonous colors, grape sugar; flour, alum; fruit jellies, poisonous colors; lard, lime; milk, water; pickles, salts of copper, alum; sugar, salts of tin and lead, gypsum; spices, flour, starch; cloves, arrow root; tea, foreign leaves, plumbago, gum, indigo, Prussian blue, soapstone, gypsum;

vinegar, sulphuric and hydro-chloric acids; wine, poisonous colors, brandy. The adulteration of butter has become so flagrant that special legislation has been obtained in this State, and manufacturers of the spurious article are obliged to label each package with the proper name, together with the proportion of the ingredients. In this way the public has been warned and educated to something like discrimination, but there are other articles, the adulteration of which is just as flagrant to decency and as injurious to health.

Of late, cheese has been put upon the market and sold in large quantities which consisted mainly of lard and potatoes, artificially colored with annato. Canned meats and vegetables are sold every day which are tainted with lead, copper, or tin from the cans. The articles themselves are almost invariably sweetened with syrup....Sugar, too, suffers greatly at the hands of the adulterator. Not content with mixing the brands, he uses glucose in every grade, even in the pulverized and granulated brands. Rice flour and molasses are also used with an unsparing hand, and importers have been known to have the color changed to that of a lower grade, to escape the high tariff, and then to bleach it to its original shade after it had arrived at its destination. This is but a very imperfect list, but it will serve to keep the public informed as to the terrible extent to which these frauds are carried on, and to prepare it for future articles on the same subject.

The Chicago *Herald*, of April 29th, propounds the significant query, "Are Sweets Poisoned?" and follows it with the following letter from J. M. Chapman, Chicago:

A farmer bought one barrel of prime open kettle New Orleans molasses, but after a short use returned it, with word that while it might perhaps do at the South and in such a wicked city as Chicago, yet for a regular diet sweetened physic was a total failure among farmers. A letter was sent to the New Orleans shipper, asking him to look up the planter who made it and discover the cause of the trouble, suggesting that while the business of poisoning molasses for 5 cents a gallon might not be stopped, it could at least be located, and now rested upon him and the planters. To this he replied it was "straight plantation molasses," and certainly was not tampered with there.

In another case, a barrel of table syrup shipped to Iowa from Chicago produced burning sensations in the stomach after eating, and caused the death of one man who used it freely. Nothing was done about it.

One more consumer asks the question: Are not syrups poisoned?

As the *Tribune* frankly admits above, State legislation has proven incompetent to suppress the traffic in adulterated foods, but it has in some instances succeeded in embarrassing it. With the above showing of adulterants, it is certainly within the province of Congress to stop the greater portion of the traffic, as a needed sanitary reform, and with our faith in the final triumph of right, we firmly believe the day is not far distant when all articles will be sold for what they are, and the component adulterants be specified.

◆

☞ The British Bee-Keepers' Association will hold their eighth great exhibition of bees and their produce, hives, and bee furniture, and fair for the sale of English honey, at the Royal Horticultural Society's Gardens, South Kensington, in connection with the Society's flower show, on Thursday, Friday, Saturday, Monday, and Tuesday, August 3, 4, 5, 7, and 8, 1882. Entrance Fees: Members of the Association, 2s. each entry; non-members, 4s. each entry. The prizes consist of silver and bronze medals, certificates, and over $200 in money. Any one wishing to obtain an "entry form" and schedule of prizes can obtain it at this office.

◆

☞ By a notice in our advertising columns it will be seen that a German bee paper is to be published in Louisville, Ky., at 75 cents a year. Those who desire to have an American bee paper in German will no doubt be pleased at the prospect. We hope it may be a success.

◆

☞ The first quarterly report of the Kansas State Board of Agriculture for 1882 is received, and is a report of the condition of agriculture in the State up to March 31. In addition to the regular crop and stock reports, the book contains special reports upon the subjects of forest-tree growing in Kansas, the raising and management of sheep in different portions of the State, a paper on the cultivation of tame grasses, and the usual meteorological summary for the quarter. Any one desiring a copy can obtain it by enclosing a 3c stamp for postage to William Sims, Topeka, Kan.

◆

☞ Of catalogues we are in receipt of one each from G. J. Pammel, La Crosse, Wis., and L. E. Douglass, Whitmore Lake, Mich.

◆

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

Removal of Our Office.

It will be observed that our number is now changed to 925 West Madison street, Chicago, Ill., just one block east of our former location. As our mail is so very large, the change will make no confusion, for the postal carriers are quite familiar with it, that whether addressed to one number or the other, letters will reach us just as promptly.

In 1873, nine years ago, when we purchased the Bee Journal, a *small* room on the third floor was all that was required. In our new location, all on the first floor, the Bee Journal and our Son's supply establishment (which is also moved to obtain increased facilities) occupies 23 times as many square feet of floor surface as in 1873.

The Postoffice Department has created a new branch postoffice within a few doors of our new location which will also be very convenient both for our patrons and ourselves.

We have a telephone connecting us with every part of the city, and should any of our subscribers be in the city, they can step into almost any store and talk with us, even if they cannot come and see us.

◆

☞ Novice has issued what he calls the "Boys' and Girls' Bee Journal," which he expects to issue occasionally free. It is not the most friendly thing to do, to copy our name, Bee Journal, without so much as saying "by your leave."

◆

☞ Mr. J. S. Tadlock has located in Luling, Texas, and we notice that he is writing short articles on bee-keeping for the local papers there.

◆

☞ We have received a copy of the "Verdict March," composed by Eugene L. Blake. It is written in an easy style, so that it can be played on either piano or organ. The title page is very handsome, containing portraits of Hon. Geo. B. Corkhill, Hon. J. K. Porter, and Judge W. S. Cox; also a picture of the twelve jurymen who convicted the assassin of our late President. Published at 40 cents, by F. W. Helmick, Cincinnati, O.

◆

☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

AMONG OUR EXCHANGES

MISCELLANEOUS.

See that the Bees have Honey.—The *Prairie Farmer* advises all to now look well to the bees, and adds:

The first week in April was delightful—we ate it, drank it, and rolled in it. How the bees improved it—the young sporting in the glad sunshine, and the workers with heavily laden paniers, sailing into port. On Sunday the 9th inst., we divided our time between the peach bloom and the bees. The bloom was almost continuous on the branches of the peach trees, and the humming of the bees, as they passed from flower to flower, reminding us of the time when basswood is rich in nectar. We sat on a rustic seat, and watched the bees rushing in and out of the hives, intent on making the most of the bloom and fine weather. It is well they improved it, for how soon the petals of the peach bloom were limp and wilted, from freezing.

The mild winter and spring has been very favorable for brood rearing, and naturalists tell us, that an insect during its larvæ state consumes more food than during the rest of its life, consequently large quantities of honey have been consumed. No honey has been gathered since the freeze, and if this cool weather lasts much longer, it will result in the destruction of many fine colonies, unless they are fed. We have known colonies to starve in May, during a dearth of honey. Every colony should be carefully watched and fed, and none left to perish, as there are not enough bees in the country now to gather the nectar and fertilize the bloom.

◆

Rules for Economic Apiaries Competition.—The London (Eng.) *Journal of Horticulture* gives the following as the rules adopted by the British Bee-Keepers' Association, for the government of competitors at the bee and honey shows. It will interest some of our readers in this country as well as Europe:

1. The object of this competition is to show the relative merits of different systems of bee-keeping, and to prove that bee-keeping if conducted on economical principles is highly remunerative to the bee-keeper.

2. Competitors shall be members of county associations affiliated with the British Bee-Keepers' Association residing within the recognized boundaries of their respective counties, or members of the British Bee-Keepers' Association residing in the county of Middlesex. Each competitor shall be limited to one entry, and shall pay an entry fee of 5s.

3. Prizes of £6, £5, £4, £3, £2, and £1 shall be awarded in the order of merit to the competitors who shall derive the greatest profit from an experimental apiary on not more than 2 hives at the outset, which may be increased to any extent by natural or artificial swarming. The total capital to be employed in commencing and maintaining the apiary must not exceed £2, and the competition to extend from May 20th, 1882, to August 30th, 1883.

4. The apiary shall be established in the garden of some cottager to be selected by the competitor and approved by the Secretary of the County Association, or in the case of the county of Middlesex by the Secretary of the British Bee-Keeepers' Association.

5. The competitor shall keep a diary (a duplicate of which shall be kept at the cottage), in which all transactions connected with the apiary shall be recorded, and each item of expenditure and receipt entered; such diary to become the property of the British Bee-Keepers' Association at the close of the competition.

6. Each hive shall be weighed, and the weight minus the roof and covering shall be recorded in the diary. The hives shall be stocked with bees without combs; the bees to be valued at 4s. per lb. Comb foundation may be used at any period of the competition at 2s. 6d. per lb. for thick, and 3s. per lb. for thin. No bees, brood, or natural comb to be imported into the apiary after commencing. Queens may be introduced into the hives at any period of the competition, and shall be valued as follows: In the month of May, 8s. each; in June, 6s. each; in July, 4s. each; and any other month, 3s. each. All expenses incurred after the commencement of the competition must be defrayed from the original capital of £2. Vouchers must be produced for all purchases made throughout the competition, including hives, bees, and any appliances used at the commencement.

7. Each competitor may make his own hives and supers, but vouchers for the cost of the materials must be produced, and the workmanship valued by the Secretary of the County Association or an expert appointed by him.

8. Every amount expended in the apiary for food or any other incidental matter of whatever nature shall be charged against the apiary, and everything legitimately sold shall be set down in its favor. Vouchers must be produced for all bees and honey sold during the competition, according to the printed forms supplied to each competitor for this purpose.

9. The Secretary of the County Association may visit the competing apiary at any reasonable time, or may appoint an expert to do so. The record of such visits, together with any remarks which it may be advisable to make, to be entered in the diary, which shall always be accessible for the purpose.

10. The competitor shall certify that during its continuance he has fulfilled all the conditions imposed by these rules, and that all his entries in the diary are true. The Secretary, or his expert, shall certify as to the quantity and value of the honey produced by each competitor.

11. Any attempt at fraud will be punished by disqualification.

12. All entries must be made on the proper printed forms and accompanied with the entry fees on or before May 1st, 1882. Application for entry forms to be made to the Assistant Secretary, Mr. J. Huckle, King's Langley, Watford, Herts.

◆

Successful.—The *Union*, of Oneida, N. Y., gives the following:

About the most successful apiarist we know of, in this section, is Ed. B. Beebee, who has been experimenting with the "little busy bodies" for several years. Out of the 94 colonies which he had last fall, he has succeeded in wintering 90, all of which seem to be in a thrifty condition. His bees consist of the Italian, Syrian and Cyprian varieties, which are conceded to be superior to our native breed. In addition to producing honey, Mr. Beebee turns his attention to the breeding of queen bees and manufacturing honey comb foundation, for which there is a wide-spread demand among apiarists. Mr. B. expects with proper management this season to reap a harvest of 10,000 lbs. of honey, and have at least 200 thrifty colonies on hand to winter.

◆

A Bee Lawsuit in Germany.—Mr. Alfred Neighbour, of London, England, translates the following from the *Bienen-Zeitung* of Jan., 1882, on the above subject. The translator says that the damages awarded shows that there must have been 900 colonies on one farm:

The Royal High Court of Justice here has recorded a judgment which is of great importance to bee-keepers. For more than 15 years many bee-keepers of Rhineland and Westphalia had been in the habit of removing their bees to the fields of a farmer whose estate was adjoining a moor belonging to the brothers Von Raesfield, which was visited by the bees in their search for honey. The brothers Von Raesfeld objected to this, and summoned the bee-keepers for trespass, but the case was dismissed. Thereupon they ordered some boxes to be exposed on the heath. The inside of these was covered with honey, and when a considerable number of bees had collected there the lids of the boxes were closed and the bees killed with brimstone by men specially engaged for the work. This conduct was the cause of an action by the bee-keepers against the Raesfelds, who were condemned by the Court to pay damages at the rate of 5.80 per hive, amounting to 5,000 m.

CORRESPONDENCE.

For the American Bee Journal.

My Reply to Mr. Heddon.

WM. F. CLARKE.

Absence and a consequent accumulation of work when at home, have rendered it impossible for me to do more than bestow a hasty glance on the BEE JOURNAL for more than a month past. Only to-day, while engaged in the pleasant task of "reading up" the back numbers, I have become aware that Mr. Heddon had been after me with "a sharp stick" in the issue of March 8th. Now I have a sincere respect for Mr. H., and, though I do not rate him quite so high as Prof. Cook in scientific attainments, I have no doubt he knows more about bees and bee-keeping than I do. Still, I do not accept him or anybody else, as infallible. Hence I should be sorry to have Mr. H. imagine that I am either offended or convinced, when I am not, and as he might deduce one or other of these incorrect conclusions from my silence, I will say something by way of reply to him.

First of all, I must flatly contradict his initial statement, "I have just read Mr. Clarke's attack on Prof. Cook." Mr. H. never read anything of the kind, because I never wrote anything of the kind. What he calls my "attack on Prof. Cook," the Prof. himself correctly designates "honest and kind criticism," in the BEE JOURNAL of Feb. 8, page 84. That was what was intended, at any rate. "Attack" implies hostility in feeling and intention. Men do sometimes make their theories so vital a part of themselves, that they regard criticism as personal attack. This is the very essence of bigotry.

As I cherish only the most kindly and respectful regard for both Prof. Cook and Mr. H., I must request and insist that "honest and kind criticism" shall not be labelled "attack." If I ever so far forget myself as to write anything for the BEE JOURNAL that deserves to be so called, I hope the editor will consign it to the oblivion of the waste-paper basket,—its proper place. What ails Mr. H. that he should resent so warmly and characterize so unjustly, what Prof. Cook, the party intimately concerned, had already accepted in the spirit in which it was penned? I have said thus much on this matter because it is vital to the BEE JOURNAL which will be deprived of one of its most valuable and useful features, if we cannot have free discussion in its columns within the bounds of courtesy. If when these bounds are sacredly respected, we are liable to be accused of making "attacks," we shall soon be afraid to differ from anybody, and then the BEE JOURNAL will be so tame and dull, that it will not be half so interesting as it is now.

Mr. H. says he has read my article on Prof. C. "with much interest and instruction." He adds, "I have re-read it, and re-re-read it, and to save my life, I can't see any argument in it." I suppose that is intended to be sharp and witty, but I am just as unable to see where the sharpness and wit come in, as Mr. H. is unable to see my argument. They may all be "thar" however, though neither he nor I can see them. Mr. H. says he read my lucubration with "much instruction," but it seems to me he got precious little, not near so much as he might have done, if he had been a more attentive reader. "First, he 'trembles' a little more before Cook than Heddon," not a very important item of information certainly, seeing that the trembling was only a harmless "goak," any how. "Second, that as long as he cries out 'more proofs' he doesn't know he is beaten." For "beaten" read "convinced," and there will be a small modicum of information, if not instruction, given. "Third, he recognizes no answer to his wordy sarcasms, in what I have said in my reply to his attack on the 'pollen theory.'" Here again for "attack" read "criticism." I assure Mr. H. that I do recognize his article as an "answer," but then it is not satisfactory and convincing. Some people can see in objects what others cannot see. It is said that "love is blind," but some humorist has remarked, that sweethearts see in one another what nobody else can.

Mr. H. says he "saw evidence," when examining "several hundred dysentery-killed colonies," that "pollen-eating caused the disease." I have no doubt he thought he saw it. I respect the sincerity of his conviction, but yet do not share it. I may be too exacting in the matter of evidence. It takes less to convince some than it does others. I am a natural-born doubter. It takes very clear evidence to convince me on any subject. This may be more than infirmity in me,—possibly a fault, but strong-minded believers like Mr. H. should be patient with those who are "weak in the faith" like me. Mr. H. details his experiment with "flour-brick," and asks, "I wonder if the above experiment will convince Mr. Clarke any?" To which I reply, not much, for the simple reason, that "flour-brick" is not pollen, exactly.

After all, I am only in the same unbelieving box with Mr. H. He says in his reply to Messrs. Demaree and Casson, April 5, BEE JOURNAL, page 213: "I see no proof sustaining Mr. D.'s premises." Mr. D. sees the proof plain as daylight, Mr. H. does not. In this connection, Mr. H. asks, "Does Mr. Demaree not hold some stories as divinely true, whose witnesses lost the cheerful habit of living in this world some hundreds of years ago?" The only "stories" that anybody holds to be "divinely true" are those of the Bible, and while I question the wisdom or propriety of such an allusion in the columns of the BEE JOURNAL, yet taking my cue from Mr. H., I will borrow an illustration from one of them. There was a disciple who has been nicknamed all through the ages of the Christian era, "Unbelieving Thomas." He saw no proof of the resurrection, but stated what evidence would convince him. Possibly he asked too much. But the very evidence he demanded was given, and then he owned himself, not "beaten," but convinced. Pile on the evidence, Mr. H. As Daniel Webster said, "it is the facts we want." When they are furnished, I shall bow to them. I think I have understood that Mr. H. does not accept the stories he refers to as "divinely true." If so, I am sorry, but not vexed at him, nor angry with him. They command my faith, and I wish they did his. But I feel none the less kindly towards him, because he considers the evidence insufficient.

Now about that "excreta" business. If I am not mistaken, for I write from memory, it was not that "Prof. Cook has never seen the dry pellets," but that he has never seen proof that they are the feces of the bee. I cited L. C. Root in addition to Quinby and others as holding the opinion that the "dry pellets" were the excreta of bees. Is it fair to call the evidence of such witnesses "undefined observations," less worthy of credence than his own "careful examinations?"

I am astonished at Mr. H.'s bold assertion that Dr. Donhoff's "subject for analysis was dysentery excreta." It was nothing of the sort, but natural, healthy, normal, ordinary excreta, taken from the rectum of the bee. If therefore it proves anything, it proves just what I stated, that pollen forms part of the food of adult as well as young bees.

Mr. H. tells us that when he uses the plural of majesty, he speaks not only for himself, but for Mrs. H. "and the children." He says, "our opinion is the opinion of all of us." Happy family! If the Heddon family is thus "like kindred drops, that mingle into one"—if he never speaks for himself alone, but always for "we, us & Co.," he has my full permission to use the plural of majesty every time! But I am reminded of a little incident. In a social gathering not 100 miles from where I write, a fond husband remarked that he and his wife had been married, I forget how many years, without ever having a difference. A married lady present exclaimed: "What a dull time they must have had!" But if the entire family is always behind Mr. H.'s pen, he is a more formidable man than the Professor, unless all the Cooks uniformly back up "the head of the house!" Plainly I have not "trembled" enough, and must try to feel more awed in future.

"What ails Mr. Heddon?" I wish I knew. It seems to me that pollen or something has turned sour on his stomach toward me. I would like to sweeten him up if I knew how. But I can't say I believe what I don't, even to make him good-natured and pleasant. If I have ever said an unkind, harsh, or disrespectful word of him or to him, I take it all back, apologize for it, and metaphorically "smoke the pipe of peace" with him.

Listowel, April 15, 1882.

For the American Bee Journal.

Review of the Dzierzon Theory.

DR. WM. R. HOWARD.

Judge W. H. Andrews wishes me to tell the readers of the AMERICAN BEE JOURNAL, whether I think that the "Dzierzon Theory" necessarily follows from the establishment of the much cherished idea of parthenogenesis."

The Dzierzon theory is a series of propositions, 13 in number, being a full elucidation of scientific bee-culture, and is ably defended by the Baron of Berlepsch, who adduces many unquestionable facts in their support. Propositions Nos. 8, 9, and 10 having direct reference to the production of drones, are the principal ones relating to parthenogenesis, the subject now under consideration. Proposition 9 is as follows:

> "All eggs germinated in the ovary of the queen develop as males, unless impregnated by the male sperm while passing the mouth of the seminal sac or spermatheca, when descending the oviduct. If they be thus impregnated in their downward passage, (which impregnation the queen can effect or omit at pleasure), they develop as females."

This proposition contains the most peculiar and characteristic feature of the Dzierzon theory. The Baron of Berlepsch, from his interesting experiments, came to the following conclusions in 1855: "Common queens fecundated by Italian drones produce mixed or hybrid workers indeed, but pure common drones, exclusively".... "Still," says the Baron, "the demonstrative scientific proof of its correctness was wanting." By the aid of Profs. C. T. Von Siebold and R. Leuckart, he was able to "demonstrate the presence of spermatozoa in female eggs and their absence in male eggs—thus solving the interesting problem scientifically, and settling the question."

I will now quote proposition 10:

> "If a queen remain unfecundated, she ordinarily does not lay eggs. Still exceptional cases do occur; and the eggs then laid produce drones only."

That these exceptional cases are more common than was formerly supposed, is evident. This proposition has direct connection with parthenogenesis, and if we admit the following proposition we admit the parthenogenesis all the way through:

> Prop. 8. "The ovaries of the queen are not impregnated in copulation; but a small vesicle or sac which is situated near the termination of the oviduct, and communicating therewith, becomes charged with the semen of the drone."

Many careful observers, sufficiently competent, have come to the same conclusions that the Baron of Berlepsch did in 1855; viz: that fecundation, pure or impure, does not affect the drone progeny, regarding its purity. L. L. Langstroth, L. C. Root, the late and lamented M. Quinby, A. I. Root, A. J. Cook, King and others teach this; and all offer the proof contained in the above propositions.

On the other hand we have many careful and practical experimenters who, setting aside all theories, bring up evidence which in its nature is irrefutable, and cannot be explained by the Dzierzon theory. For instance it is held by them that the male and female progeny are alike influenced by fecundation; which the theory might allow, but its best and ablest advocates deny.

As Mr. Andrews wishes to put some one "on record," and claims that the writers on the subject will not do so, for his benefit, I will give him my views, not that I wish to have any controversy with him or any one else, but that he has asked it of me in a polite manner, and I have not refused.

I have read the Dzierzon theory, and have carefully examined it, with the Baron of Berlepsch's experiments, and taking it as a whole, it is the most practically scientific work for so few pages that I have ever examined. There never has been such a series of experiments given to the public, so interesting, so exhausting, or so expansive; if we will except our own L. L. Langstroth, of this country.

I may make some statements that do not seem in keeping with a believer in the Dzierzon theory, yet if I am skeptical I will give my reasons as well as possible.

That a fecundated queen is only enabled to produce worker eggs, and that this fecundation or fertilization is the only advantage gained by sexual union, over her virgin power and usefulness, I must say that I do not recognize as a fixed fact, for several reasons, some of which I will briefly state:

A drone-egg laying or unfecundated queen, like a laying worker, deposits her eggs promiscuously in both drone and worker cells, sometimes hundreds in one cell. These eggs are disposed of very irregularly from base to the extent of the side-walls, there is not that systematic arrangement, which marks the work of a fecundated queen—the brood in a compact circular cluster. She does not always examine the cell before depositing the eggs, and will often deposit a score or more in the same cell without changing her position; her position while depositing is not like that of a fertile queen, almost any position suits her, while a fertile queen invariably assumes one position every time she deposits an egg, so far as my observations have been extended, and that position, after carefully examining the cell, she turns herself obliquely across the comb the head inclined downward, to the right or left, at the same time curving her abdomen, introducing it into the cell, withdrawing it in about 5 seconds, leaving the egg firmly attached to the base of the cell. The drone-egg laying queen and laying workers are not jealous rivals, neither will these queens engage in combat with each other as readily as they once would have done. Virgin queens are rivals until they have completed their wedding tours. I have had four of these queens and I don't know how many laying workers all living peaceably in one hive, all having free access to the same combs at the same time. The conditions of these individuals are the results of circumstances—influences of early life.

A virgin queen after having made several unsuccessful bridal trips, gradually loses her sexual propensities, and toward the last fails to attract her aerial gallants, which under ordinary circumstances are so quick to respond, and after a time she ceases to sally forth, and settles herself to become, if she ever lays at all, a drone mother, a useless incumbent in the hive, with no maternal cares, short lived, even if allowed to run her course. The ovaries are undeveloped; the spermatheca a useless appendage, without muscular power, finally becomes solid. The ovarian nervous ganglion diminished in size forms a mere apology for what it once was, or might have been. She displays neither gracefulness in motion, magnitude, instinct or regality. Her progeny are subjects of "agamic" reproduction, living individuals produced without the congress of the sexes—parthenogenesis.

A fecundated queen deposits her eggs in regular order, except, sometimes when a young queen first begins to lay, she may occasionally deposit 2 eggs in one cell,[*] and in rare cases drone eggs in worker cells, which is accounted for by some authors in this way: That the muscles of these delicate organs are not well practiced, or sufficiently developed by training to give the queen the proper control of them, which she afterward acquires. I have noticed that a young queen commencing to lay did not as carefully examine the cells before depositing, as older queens, and sometimes I have noticed her to examine one cell and lay in another, as if by mistake, and this I had supposed to be the cause of the frequency of 2 eggs in one cell. It has been stated that queens deposit their eggs promiscuously, and that the workers—nurse bees perhaps—remove them and systematically arrange them, and one isolated case is cited to justify the the assertion; yet, as above stated, a fecundated queen deposits her eggs with precision. As the young fecundated queen increases in age, she gradually increases in size, assumes a graceful appearance, exercises a seeming maternal judgment, as her cares increase, deposits eggs more or less according to the influx of food or necessity requires, always provident of the future welfare of the colony by never leaving it hopelessly queenless when accompanying a swarm. [Who ever heard of a drone-egg laying queen exercising any of these traits?] She has respectability among her subjects, and allows no rivals.[†]

It will be seen that fecundation not only qualifies a queen to lay worker eggs, but causes a complete development of the generative organs. The ovaries enlarge, the spermatheca performs its office of fecundating the passing ovum at will. The ovarian ganglion retains a healthy appearance. In fact a complete development of all the animal tissues in the anatomy of the queen bee, giving her longevity, energy, strength, prolificness, complete maternal instinct, in a word, perfection, is but the result directly or indirectly of fecundation.

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[*] I have noticed cases wherein a good vigorous queen has deposited 2 eggs in one cell when a natural swarm had been placed in an empty hive, and only constructed a few square inches of comb, and it yet unfinished.

[†] I have in a few rare cases observed 2 queens, in well regulated colonies, dwelling amicably together.

I will here state that I am unable to prove from my own extended experiments with bees that the drone progeny of a fecundated queen is not influenced by impure mating; as I have on several occasions noticed hybrid drones from black queens, as well as hybrid drones whose grandmothers gave as pure well marked a progeny as any I ever had. One case in point I will relate. I bought from Judge Andrews last year in May, one Italian queen whose worker progeny were all well marked; at the same time I obtained a sealed queen cell from the same hive, and three others from as fine bees as could be found in the Judge's yard—which he could vouch for as being pure—three of these cells hatched as beautiful queens as any one would wish to see—the fourth cell never hatched. Two of these queens were mated with black drones, one of which was from the cell obtained from the queen I purchased. The third queen was purely mated, and gave a well marked progeny. The first two produced hybrid workers and occasionally a black drone, yet the most of their drone progeny were well marked Italians. This strange exception might be accounted for by the variation of individuals of the same species and as the Italian bee is not generally recognized by naturalists as a distinct species of *Apis*, but a climatic variety of *Apis melifica*, it may yet turn out that these occasional outcroppings of impurity are the result of progenitive inheritance.

I am of the opinion that the subject is one of much importance, and needs further investigation, and that many theories, hypotheses, etc., will rise and fall, before anything like a definite conclusion will be arrived at, upon which all may agree.

Kingston, Texas.

For the American Bee Journal.

Italianizing Cyprian Bees.

EDWARD P. ABBE.

In 1880 I received from Mr. Jones one of his imported Cyprian queens, early enough to rear one forced queen in the fall—and a very handsome one she was—a duplicate of her mother, prolific and long-lived. She is a reigning beauty now.

During last summer I reared about a dozen other queens from the imported one, when I lost her by carelessness. All of these young queens were very nearly, if not quite, duplicates of each other and of the old one. These gave me an opportunity to test some of the qualities of full breeds and of the half breeds—*i. e.*, half Cyprian and half Italian. There is no need of my mentioning that the pure Cyprian is a cross, active, industrious, prolific beauty; for all, or nearly all accounts agree upon these points.

For one whose only object in the apiary is the pleasure derived from it, the Cyprian is, in its purity, a calamity. But with the mixture of Italian blood to quiet down the rampant growth of Cyprian spirit, I think they are a blessing, for they infuse a new and pure blood, increase the fertility and tendency to late breeding, and fix more certainly and permanently the characteristic yellow band, adding beauty and grace to the whole apiary. This is my experience, and I for one am not sorry that I have tried them; but very glad to have got through with the trouble and stinging labor of this infusion of new blood. I had, for the past 10 years, devoted my apiary of 20 colonies to perfecting a strain of Italians, until it was as good as I think Italians could be made. The bees were large, industrious, three-banded, beautiful, gentle, and easily handled, but there was a strong tendency to lose the broad yellow stripes and run into what are called "dark Italians." If I have checked this tendency, and have fixed the characteristic bands of the Italian more permanently, I am satisfied. I shall now breed back again to gentleness.

New Bedford, Mass.

For the American Bee Journal.

Extracted Honey—No. 3.

JAMES HEDDON.

The upper story spoken of in our last article (No. 2), on page 55, has a capacity of 40 to 50 lbs. of honey, net, and it will probably be a week or more before it is necessary to examine the supers. Then go to your strongest colonies and remove the covers (and right here allow me to say, that the great secret of successful and speedy subjugation of bees depends upon giving them the first blast of smoke before they have had time to "think twice," after you make the first jar), and smoke down the bees, look at the tops of the combs, and the one that looks the "fattest" and brightest (usually near the center) will contain the most honey; lift this one, and look at it, then one near the outside, and you will form a close estimate of the amount of honey the super (that part of the hive which contains the surplus) contains, and the speed of development, within the super. Your register shows the date at which the bees commenced to work in the upper frames. Suppose you have found the super ¼ full, just set your "amount pin" to ¼, and the date pin to the date, and so on over the apiary.

The 10 or 20 colonies most advanced, will need looking at again in 5 to 8 days, and even less, if the rate of the flow is rapidly increasing. When the time has arrived, your registers show you a rod or two away, which are the 10 colonies out of your 50 or 500 that need looking at. Upon examination, if none are quite ready to extract, it is a safe rule to go by, that none in the apiary are. But if, on the other hand, many of these 10 colonies need extracting, look well to the next foremost turned pins, as soon as the job is done, and follow this method of search and work through the year.

But a much disputed point arises as to what condition the super must be in, to warrant the emptying of it. Messrs. Dadants, who are good authority, believe in having all the combs sealed or capped over before extracting the honey, and more than this, they believe in letting it stand on the hive, lifting it up, and placing another set of combs under it, and so on to the end of the flow, until that flow is over, as they think that on the hive is the best place for the honey to "ripen," or take on that smooth, rich, oily condition. On the other hand, as good authority as Prof. Cook says there is no need to wait for the capping over of honey. The Professor has the facts, that the waiting process involves increased capital and labor upon this side of the argument. All the Dadants have to sustain their side of the question is, that with their process, the honey is of much better quality.

I have thoroughly tried both plans, and if the honey taken is to be consumed as sweet sauce (as most of our surplus now is, the minority being used for manufacturing purposes, as yet), I stand strongly on the Dadant side of the argument. Their words sound as if they came from experience, and from those who depended upon the favor shown their goods, for their success, viz: the specialist.

I will say that if you have the combs, use the tiering up plan of the Dadants. It is good. I have tried it more years than one. It gives you more time to do your work in; you need not rush because the season does; if you use this plan, at the end of the white honey flow remove all your supers, just as you would boxes or cases of sections, smoking down the bees, and carrying your supers into your room prepared for "getting bees out of boxes," and when the few adhering bees have gone, you can uncap and extract the combs at your leisure. But on the other hand, if your combs are scarce, or you are just making them from comb foundation, and you feel that your capital will not warrant the making so many the first season, prepare yourself with a light box, with tight bottom, and the size of the hive, with a cloth lid, and convenient handles, put 6 combs or frames of foundation in it, and approach the hive to be extracted from. The tools I carry are a heavy I X L knife, smoker and turkey quill. I open the hive, smoke down the bees all I can quickly, and then trade combs with them, taking the 6 fullest ones out of the 7, and brushing all clean of every bee. Thus I open and close the hive at one operation. The condition of the 6 combs is this: The honey is partly sealed; the sealed places are those spots farthest from the septum, and, fortunately, the easiest to uncap.

The one comb left is hardly fit to extract, and is the odd comb that saved the bees from being crowded and idle; the 6 will make just 3 pairs, and 3 whirls, and contain a very good article of nearly ripened honey. Of the ripened condition of this "throw" much will depend upon the stage of the blossoming, and state of the atmosphere. Blossoms yield the thinnest honey at first, and richest at the close, even to the "strippings." One thing is sure, you cannot wait till the honey in the super is all sealed, without losing the filling of a second super, unless you adopt the tiering up plan, spoken of at first.

Sometimes you will find brood in all stages in your super combs. There is a slow, continuous motion of the crank that will throw out the honey, but not the brood, and this motion, which only experience can teach, must be adopted for broody combs.

I very frequently receive letters and postal cards inquiring if drone comb is not best for sections and super frames, to which I always answer, No. One of the blessings that comb foundation has brought to us, is the fact that by filling the brood frames of the hive full of it, we get rid of a class of consumers called drones, and at the same time get almost complete control over fertilization. In doing so, we are working against the instincts of the bees, and the queen, anxiously looking for drone cells, will be sure to go into your surplus department to deposit eggs if you have drone foundation above, and a proper lack of it below. Experience must drive every drone foundation mill back into type metal.

As soon as your extractor contains all it will hold below the frame, draw off at the gate, into one gallon stone crocks, which should be piled up on each other about 6 to 8 feet high. If pieces of wood ⅞x½x6 inches are laid across the tops of the crocks (2 to each crock), the spaces thus made will allow of a circulation of air that will allow of improvement of the honey as it stands. The honey house should be dry and airy, and thoroughly screened against bees and flies. Do not forget that you will have a damp air in a cool room. Cool air (as in double-wall houses), like a cool pitcher of ice-water, drains dampness. With this third article of general remarks, I will close what I have to say about extracting honey, for the present.

In regard to marketing it, I have never adopted a course that I think as good as the one laid down in Dadant's book.

The uses for extracted honey are encouragingly on the increase. It is already used as a table food, confectionery, in medicinal syrups, manufacturing tobacco, wines, liquors, mead, metheglin, soda water, printers' rollers (entirely supplanting sugar syrup), cakes, pastry, preserving fruits in natural state, jellies and jams, medicinal syrups, ointments, salves for sores, cures for asthma, indigestion, see "Honey as Medicine;" licorice, egg-foam, vinegar, rose honey, table syrups, and many other purposes.

And now in closing let me say, while you should not build "air castles" and dream of "cisterns full of honey," you should know that just at rare intervals during good honey seasons, the gathering powers of some colonies are great; that Hosmer reports 53 lbs. of extracted honey in one day; Gallup 60 lbs., and I had 30 lbs. gathered in the same period of time, all from the basswood—the bee-keeper's friend.

Dowagiac, Mich.

For the American Bee Journal.

Rearing the "Best," Bees.

W. Z. HUTCHINSON.

I have been much interested in the "best bees" controversy, and cannot refrain from a few remarks on the subject. In all this broad land there is probably not one bee-keeper who does not wish for the best bees, the difference of opinion being in regard to which are the best bees, and how to obtain them.

As to which are preferable, the light or the dark Italians, I will say that I have tried both, obtaining them from a dozen different sources, and I unhesitatingly pronounce in favor of the dark, leather-colored Italians. I consider the light-colored bees a trifle easier to handle, but the dark bees are so much more energetic, and store so much more honey, that I am more than willing to overlook any of their little outbursts of temper.

My experience with hybrids is as follows: I commenced bee-keeping with black bees in box hives, but the bees did not long remain in box hives. Located within a mile of my place were two Italian apiaries, and one-half of my young black queens mated with Italian drones. From what I had read I expected that there would be some "fun" in handling these hybrids, but, to my astonishment, they proved to be more amiable than the blacks. I have seen some pure Italians that were more irascible in their disposition than were the hybrids. In the fall I sold three of these hybrid colonies, and with the proceeds bought queens and Italianized my whole apiary. The next year I bought an imported queen, reared queens, and Italianized all the black bees within three miles of my apiary. Of course, some of my young Italian queens mated with black drones, and they produced hybrids that—well, I took back all that I had ever said about book-makers not knowing what they were talking about when they said that hybrids were "cross." To go back a little, the three hybrid colonies that I sold, those having the black queens mated with Italian drones, outstripped my Italians. Of course, I attributed this to the difference in location (the locality really was an excellent one), but the next year the owner of the hybrids had his whole apiary Italianized, and since then, a period of three years, he has never had the yield of honey, nor increase of colonies that he had the first year with the hybrids.

Will Mr. Heddon, or any one else who knows, say whether these hybrids can be bred in-and-in, and their good qualities be preserved at the same time, or must the strains be kept up by a continual crossing of the pure races?

Mr. Editor, you may have different views from myself upon the "dollar" queen business, but when you say: "The 'best bees' will have just the requisite number of stripes, whether it be one or a dozen," we agree exactly.

Rogersville, Mich.

For the American Bee Journal.

More About Bellows Smokers.

J. H. MARTIN.

Every bee-keeper, if familiar with the history of the smoker, is ready to accord to Mr. Quinby the honor of putting upon the market the first bellows smoker. Every subsequent original inventor found the bellows, the valves, the fire-tube and the wind. It is a mystery to not a few, what subsequent inventors could claim as original. The mystery is explained by the claim that some punched a hole and let in air, where air could not get in before. Mr. Bingham has enlarged this hole to a space between the bellows and fire-tube, and there you have the original smoker. We have no doubt but that this point can be legally protected by a patent, for as trivial things have often been passed upon as improvements, and worthy of a patent as this. For instance, an inventor improved letter envelopes by inserting a thread across the end of the envelope, one end of the thread projecting so as to be taken between the thumb and finger and the envelope easily torn open.

Another inventor grasped the brilliant idea that a knot in the end of the thread to give a firm hold, was a great improvement, and applied for a patent, which was granted upon the ground that it was an improvement over the previous method. Now suppose our last inventor of the knot had proclaimed himself as the only original inventor of the envelope for letters, he would have been no more unreasonable than for the inventor who punched the hole to claim that he is alone the original inventor of the smoker. Neither can any one claim to be the inventor of the first successful smoker, for we used one of Quinby's first smokers and it was a great success for a new invention. Since then we have used various so-called improvements, some of which were no better than the first Quinby.

We wish to exercise due charity for all, and accord honor for all improvements where honor is due, but when the man who tied the knot in the end of the thread claims to be the original inventor of all envelopes, we have a right, as a letter writer, to protest against so broad a claim.

Hartford, N. Y.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

May 11—Champlain Valley, at Middlebury, Vt.
T. Brookins, Sec., East Shoreham, Vt.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

June 3—Hart County, Ky., at Woodsonville, Ky.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

For the American Bee Journal.

Central Michigan Convention.

The Central Michigan Bee-Keepers' Association met at Lansing, at 10 a. m., April 20, and was called to order by President Ashworth. E. N. Wood was appointed Secretary *pro tem.*, and 22 names were added to the Association.

In his annual address the President alluded to the mutual benefit derived by interchange of thought at the meetings, and also spoke of the importance of providing bee-pasture, especially in Lansing where there are so many bee-keepers in such close proximity. He urged bee-keepers to provide for larger exhibitions of the products of the apiary, and presented a tabulated statement of those products for 1881.

Reports and estimates show that about 120,000,000 lbs. of honey were produced in the United States last year. At 12 cts. per lb. this would amount to $14,400,000.

An interesting discussion ensued on the topics suggested in the address.

The following officers were elected for the ensuing year:

President—Rev. J. Ashworth.
Secretary—E. N. Wood.
Treasurer—Mrs. T. Harris.

Vice Presidents—Mrs. S. J. Gibson, Clinton; W. O. Wilson, Ingham; James Frye, Jackson; E. W. Lowe, Ionia; C. Clement, Livingston; E. Curtis, Shiawassee.

An opportunity having been given, a number of bee hives, section boxes and other apiarian supplies were exhibited, and also an ingenious device by Prof. Cook for measuring the length of the tongues of the different races of bees.

E. N. Wood read an essay on the "Bee Hive," describing various styles, and especially the hive manufactured by Narmore & Wood, of North Lansing.

A discussion of the merits of the Cyprian bee was led by J. Harper, after which Prof. Cook was called on for an address on the "coming bee." He did not decide positively from which race the "coming bee" would spring, but earnestly assured the Convention that the dollar queen trade would not hasten its approach.

A resolution to make a large exhibit of apiarian products at the Central Michigan Fair next fall was adopted unanimously; as was also the resolution offered by Prof. Cook making the President and Secretary a committee to request the agricultural society to provide a building for this object. The Society then adjourned to meet on the Tuesday preceding the autumn fair. Rev. J. Ashworth, *Pres.*
E. N. Wood, *Sec.*

Hagerstown (Md.) News.

Md., Va. and W. Va. Convention.

A number of bee-keepers of these States met at Hagerstown, Md., on April 20, and organized the Union Bee-Keepers' Association of Maryland, Virginia and West Virginia. Mr. D. A. Pike, of Smithsburg, was chairman, and J. Luther Bowers, of Berryville, Va., Secretary.

Messrs. J. F. Brown, of Winchester, Va., S. Valentine, of Double Pipe Creek, Md., and Wm. Anderson, of Harper's Ferry, W. Va., were constituted a committee to select a name for the Association, who reported the name as above given.

The organization was perfected by the election of the following permanent officers: D. A. Pike, Smithsburg, Md., President; J. L. Bowers, Berryville, Va., Secretary; A. Burton, Harper's Ferry, W. Va., Treasurer.

It was resolved to hold the next meeting of the Association in this place on some day, to be named by the President, during the Washington County Agricultural Fair, the coming fall.

Messrs. A. Burton, J. F. Brown and S. Valentine were appointed a committee to draft a constitution for the Association.

It was determined that, at the next meeting, each member exhibit something to the apiary.

Various subjects connected with bee-culture were discussed, among them, "The best way to get surplus honey," "The best method of queen rearing," and "The best method of transferring bees." The discussion elicited many new ideas on the subject of bee-culture, and much important information was imparted by this interchange of views

☞ A bee-keepers' convention will be held at Richland Center, Wis., on May 4th and 5th. All interested are cordially invited.

☞The Champlain Valley Bee-Keepers' Association will hold their semi-annual meeting at Middlebury, Vt., May 11, 1882. T. Brookins, *Sec.*

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

SELECTIONS FROM OUR LETTER BOX

Artificial Comb Honey.—Mr. Bright, editor of the *Christian at Work*, and myself, have had some correspondence on artificial comb made of parafine, etc., in the course of which he stated that he had seen the artificial comb. I called the attention of Mr. A. J. King to it, and also denied his statement. Mr. King offered Mr. Bright $50 for proof that he was right, and the latter sent me a postal half way admitting that it was comb foundation that he saw. All this I believe Mr. King intends to publish in the May *Bee-Keepers' Magazine*. Mr. Stanley's article from the *Empire State Agriculturist*, printed on page 244 of the Bee Journal, has a very good paragraph on the impracticability of making comb artificially, and I wish to send a marked copy of the article to Mr. Bright, as a sort of "parting shot" aimed at his erroneous statements. He probably thought artificial comb and comb foundation are one and the same thing. He is undoubtedly wiser now than when he wrote the article last February. Zophar Mill, Jr.
New York, April 26, 1882.

Glucose.—To say that the above never candies, is a mistake. Some time ago I saw 100 bbls.—2 car loads—returned to the factory because it had so thickened that it did not run out the barrel. I have also seen it thickened in glass jars put up with comb honey to be sold for pure honey. To tell, therefore, that all candied honey is pure would lead to a wrong opinion. We had hard frost here several nights after a week or more of warm weather, when the thermometer was up to 86° in the shade. Much injury, of course; but I hope the white clover was not killed here last summer, when we had no rain for about 2 months, and the heat up to 156° in the shade; it is said that clover does not give honey the first year. T. Hulman, Sr.
Terre Haute, Ind.

Very Encouraging.—Our bees are in fine condition, and things look promising for the coming season. We have had the same weather you describe in the last Bee Journal, and it still continues. The fruit is somewhat injured, but not nearly all killed. My bees are working finely to-day, and the combs are filling up nicely with capped brood, the drones are also hatching, and some of them flying.
W. B. Spence.
Sidney, O., April 24, 1882.

Three Weeks Ahead of Time.—I had a fine swarm of Italian bees the 21st of April. My bees are three weeks ahead of any year I ever had them—now twenty years.
L. T, Mobberly.
Long Grove, Ky., April 24, 1882.

Snakes Eating Bees.—I read with a great deal of interest that article in your last paper by Prof. C. F. Kroeh on the parthenogenesis of bees. I hope Prof. Cook, Mr. G. M. Doolittle, and some of the other big guns will favor us with their views on the subject. Bees here are doing well, in spite of the water, which has ruined most of us—that is all but those which were placed upon sheds and rafts before the water came up. The snakes, however, are devouring great numbers of them. I should like to know whether they eat them for the honey?

T. K.

Point Coupee, La., April 20, 1882.

[They probably eat them for the same reason they devour flies, snails, and other insects.—Ed.]

My Early Work.—Bees are booming, gathering honey rapidly from horsemint and various other flowers. I have one of Root's chaff hives, with 80 1-lb. sections on it, and about half a bushel of bees in it, if they were dead and measured. About half the boxes have been partly filled with new honey for nearly 2 months. A few rainy days causes the bees to draw on the sections to feed the brood and larvæ in the lower story; for there has been but very little space in all my hives; that is, the lower story, for nearly 3 months for honey, it being so completely filled with brood. I notice in the Bee Journal of the 29th ult., that Mr. J. W. Eckman, of Richmond, Tex., wants to know "what it was that my bees were getting so much honey from, that I could extract so early?" Now, I did not say that I was going to extract a barrel of new honey, but I did extract some new honey, just as I said I would, and I believe it was gathered from fruit blossoms. If Mr. E. will come up and spend a day or two with me, I think I can show him how I get my bees in a condition in very early spring to take advantage of the first flow of honey from any source. I do not want over 1,000 cubic inches of comb in the brood-nest, *a la* Doolittle. I use two styles of frames, the Langstroth 9⅛x17⅝, and a nucleus frame 9⅛x12¾. I use 7 of the former and 8 of the latter in the brood nest. In early spring, that is, as soon as I see a little white comb along near the top-bar, I raise the two outside frames, spread from the center of the brood nest, making room for the first two frames. This I do about every ten days or two weeks, according to the weather. Continue this way of promoting brood-rearing, and you will soon have the brood-nest so filled with brood that there will be no place for honey; then it is that the bees will put the honey they gather into any thing you may choose to give them; even a nail keg. I do not leave any frames in the upper story in winter, but take them all out, put two thicknesses of old corn sacks on top the brood frames, fill the upper story half full with good dry cotton seed, and if not disturbed during bad weather, nearly the whole force will live through our winters here, besides the increase during winter that is being added daily. Last fall I had 50 strong colonies. About the last of January I doubled back to 27. I have had to date 26 new swarms (some I have returned), besides about 40 three-frame nuclei, keeping queens until their progeny hatches, and I have done all in my power to keep back all swarms by giving more room, shading, and some tiered up three stories high.

J. S. Tadlock.

Luling, Tex., April 17, 1882.

Judge Andrews' Lecture.—A subscriber wishes to trouble you with a few notes. Quite an interest is being taken here on the subject of bee-culture. We have a County Bee-Keepers' Association, which meets monthly; the State Association assembles here on April 25th, and our citizens are preparing to entertain all visitors and members free of charge, and last, but not least, Judge Andrews is delivering a course of lectures to a large class, among which are some of our best bee-keepers. The lecturer advises his class to read the books and Bee Journal, but to do their own thinking. He is especially severe on so-called moth-proof hives and venders. The lecturer admits the theory of parthenogenesis, and rejects the "pure mother, pure drone theory." He says the male of the bee, as in other life, impresses his characteristics more strongly and clearly on the offspring than the female, and impressed on his class the importance of the pure blooded drone. The lecturer dwelt at length on the queen bee, illustrating his subject and exhibiting specimens from his apiary at every stage of life, and wound up his last lecture on the queen by giving his class an opportunity to witness a royal combat. During one of his lectures the Judge exhibited to his class some worked over comb. On several points the Judge differed from the books, but some of these he wished to verify before positive assertion, and lest I report him wrongly, I shall omit them for the present.

A Subscriber.

McKinney, Texas, April 22, 1882.

Almost a Blizzard.—We have a cold snap on hand now, which has lasted from the 9th to the 23d, and bids fair to reign with winter's rigor still a while longer—a gloomy prospect for my pets. We had a profuse apple and peach bloom, but it was all lost to the bees; they had to stay in to keep the young brood warm. Throughout March the prospect was very fine, but the greater part of April so far has blasted our prospects. I have been feeding my bees for two weeks. When it was warm enough for them to venture out, some would gorge themselves, become benumbed, crawl off a little distance, lay up and die, unless caught up and put in a hive, of which class I took up a great many and put in at the top of the hive without any bad results so far as I could see. The first was so severe as to wilt some of the young grape shoots and kill most of the fruit, and fears are entertained that it will fall off yet, though protected more or less by the fog from the river. We are in a beautiful vale below Louisville, drained of its many ponds, and now very fertile, producing fine hay crops, wheat and corn, and running back to the hills, with fine ridges of sand suitable for gardening purposes, grapes, melons, cantaloupes, etc. Along some of the smaller streams and wet places grow some of the asters and goldenrods. I have about one acre sowed in sweet clover and mignonette, some of which is looking very fine; I have also sowed some Alsike clover, and about one acre in white mustard. This fall I will sow 5 or 6 acres in sweet clover, and in the spring sow the same in mignonette. I wish to treat my pets well. I have now 37 colonies. No swarms yet, though in March I expected a good many ere this time. I have some now which from all appearances, will swarm as soon as the weather will admit of their doing so. We have a fair prospect for a good locust bloom, should the weather get warm enough for the bees to gather it; if not, woe to the bees. I have contracted 15 colonies to a man in Louisville when I have them, and will sell more if I find a purchaser. Success to the Bee Journal. I would give up the business if it was not for it. I gain all the information I need from its pages.

G. W. Ashby.

Valley Station, Ky., April 23, 1882.

Preparing Pasturage.—We have 77 colonies to commence spring work with. The most of them are strong for this time of the year; 50 of this number we bought this spring from neighbors that wished to dispose of their bees. The weather is very unfavorable at this time, cold and rainy. Bees cannot fly. Cherry and plum trees are in bloom. We want a little sunshine to make us and the little workers happy. We have sown two acres of alfalfa for forage, and intend next season to sow Alsike. We sell our extracted honey readily for 15 cts. per pound. Every one that comes to get honey wants to see the extractor; it is a great curiosity to them. When we extract they are coming to see the honey taken out of the combs.

Mrs. C. M. Kingsley.

Elvaston, Ill., April 24, 1882.

Bee Notes from Kentucky.—Bees in Kentucky are in fine condition. We have an encouraging outlook. I have lately attended a meeting of the Barren County, Kentucky, Bee-Keepers' Society; we had a good meeting, and all seemed in good spirits. I also attended a meeting of the Hart County Bee-Keepers Association, at Munfordville, Ky., and assisted in organizing a county association. We had a large attendance and organized a society that promises to do much good. The next meeting will be on the first Saturday in June, at Woodsonville, Hart County, Ky. We hope all the Vice Presidents of our State Society will call meetings in their localities and organize. We have not yet fixed the time of the State meeting at Louisville, but are waiting for the time of the North American Bee-Keepers' Society to be fixed at Cincinnati, as we want to meet just before that, so that we can go right on to the National Convention.

N. P. ALLEN.
Smith's Grove, Ky., April 24, 1882.

Care of Comb Foundation.—What is the proper method of treating comb foundation which has been kept over since last year? Should it be softened by heat, and if so, to what degree of warmth should it be subjected!

E. R. BULLER.
Campbellford, Ont.

[Hang it, one sheet at a time, in a strong colony. The bees will heat it to the proper degree for working. No criterion can be given for heat, as some makes are harder than others, and age and exposure will affect it differently.—ED.]

An Error.—I was in error in giving the size of my frame in the BEE JOURNAL, of April 12, page 235. It should read 12¾ inches in the 10th line, instead of 12½ inches, so as to take 3 one-pound sections each way.

Benmiller, Ont. PETER FISHER.

The Industrial Exposition in Denver.—Colorado is fast taking rank with the older States of the Union in the matter of bee-culture, and before another decade, no doubt, it will be an important industry in this State. There is no method at present of gaining valuable statistics in regard to the extent of the business, but if such information could be obtained, people in and out of Colorado would be astonished at its magnitude. This is especially gratifying; the more so, because it has only been a few years since there was no bee-culture of any importance in the State. To have accomplished the results as at present existing, in so short a time, is a magnificent tribute to the energy and progressive spirit of our people. Bee-culture is being recognized as an important factor in the commerce of the country, and if properly fostered and encouraged, will soon grow to large proportions. A bee-keepers' association was organized in Denver, Dec. 15, 1881, consisting of 20 members, who owned 425 colonies of bees; but this is scarcely a shadow of the number owned in the State at large. The programme of the first annual exhibition of the National Mining and Industrial Exposition, to be opened the 1st of August, 1882, has just been issued. Space for exhibits is offered free of charge. Every industry in the country will be represented. Dairying, agriculture, floriculture, horticulture, apiculture, manufacturing, household goods, ornamenting, the arts, food and medicinal preparations, will be exhibited in abundance. People from every nation will visit the Exposition this summer. Excursions are being arranged on all roads. The best place to invest a small capital is in some of these Western States and Territories. Colorado, Wyoming, New Mexico, Utah, Idaho and Montana are the poor man's paradise.

WOMAN'S INDUSTRIAL ASS'N.
Denver, Col., April 18, 1882.

Last Year's Record.—Last spring I started with 7 colonies in old box hives. On the 16th and 17th of May I transferred them to movable frame hives, filling 6 frames for each hive with comb and brood, and some honey, leaving a surplus of about 100 lbs. of honey; fed back about 20 lbs.; increased to 31 colonies, and obtained 250 lbs. of honey. They have come through the winter splendidly; wintered in the cellar; lost 2 by spring dwindling. They have been carrying in pollen; had a swarm April 4—earliest ever heard of here. Am feeding them. As a subscriber to the BEE JOURNAL will ask, can I expect to bring them through and how, as the weather is too cold at present for them to fly, and little yet in bloom but willows. Am looking with bright hopes for the present year with my busy bees, with the aid of the welcome JOURNAL. S. McLEES.

Tuscola, Mich., April 13, 1882.

[Yes; you can easily bring the swarm through nicely. Give them a couple combs of brood from some hive which can spare them, and feed plentifully till fruit is in bloom.—ED.]

Saw Palmetto.—I send you in this mail two flower stalks and one leaf and stem of the saw palmetto; I tried to get an average size, as you will see I have cut off part of the stem of the larger flower stalk. I done it in order to pack it better. I send the small one because it is fully blown, though I fear all the blossoms will drop off before you get it, it is about the smallest stalk I ever saw. I can give you very little data now, as I have never given the matter any attention; later on I think that I will be better posted as I intend to observe closely all the honey plants that are here. I saw the first flower stalks about March 1st, and the same stalks that I saw then are only to-day partly in bloom, so they evidently require quite a while to become perfect. These stalks were evidently the "early" ones, as the great bulk are just in bud. There are from 3 to 6 stalks to one plant—it is a small and weak one that produces less than 3. On the large and thrifty plants the flower stalks are from 2½ to 3 feet in length, with numerous lateral branches, making an immense mass of blossoms. As to the length of time that it remains in bloom I cannot say, nor its value as a honey plant. I will observe these points and write you later on. I examined the colonies yesterday, but found no increase of honey. Judging from the length of time that the bloom requires to open, I think there will not be much gathered before May 1st. I am a novice in the business, having never even opened a bee hive until a couple of months ago, so that I am not overflowing with bee lore, but any information that I can give you I will cheerfully send. Should any question occur to you that I have not answered, please write me and I will do my best; when cabbage palmetto blooms I will send you all the data that I can. If the bloom is lost or spoiled so that you cannot use it, advise me and I will send you again.

W. H. STEACY.
Tampa, Fla., April 10, 1882.

[The saw palmetto stalk and flower came to hand, and Mr. Steacy has our thanks for the same. Much interest has been felt regarding Florida for apiculture—its climate, soil and spontaneous bloom—and any information on the subject will be highly appreciated.—ED.]

California Notes.—The honey season last year came very suddenly, some 2 weeks earlier than the season before, and the bees were just booming at the time of the frost. I had a number of colonies with 2 tiers of sections, but very few perished. At the time the bees got to swarming, I had a considerable number of young queens being fertilized in nuclei, and queens and swarms got mixed (my old queens had clipped wings). I got a bunch of bees that had 6 queens; 1 got killed. They were on a low bush, and more than I could lift. The cluster was full 3 feet high, just clearing the ground by about 1 inch, about 10 inches thick, and about 16 inches wide one way. They filled 3 hives with bees, one of which filled a tier of top sections. I should judge they must have weighed over 50 lbs., possibly 75. The surplus queens I utilized. If my subscription expires before you hear from me, do not stop the BEE JOURNAL—I should feel like a lost sheep without it. I have succeeded in sending queens to Oregon the past season successfully. I find sugar better than honey in shipping queens, but they must have water. A very good bottle is made of tin, with just a little hole. Atmospheric pressure keeps it from leaking. I have sent them with only a cake of sugar and the water. They have to go by steamer. In overhauling my nuclei last winter, I united several, using the cage mentioned in a former number of the BEE JOURNAL. The next day, as the bees were quiet, I released the queen without trouble. I never cut or mutilate the combs. Sometimes the bees will release her. Ordinarily I raise the cage and let them get together, always watching to see if the queen is well received. I am so well satisfied with it, that I shall not look further. I have even introduced virgin queens successfully with it. The form I use is 2x3 inches, ½ inch tin sides, No. 12 unpainted wire cloth. I know of a number of cases where parties had to be shown a queen for the first time, who were successful with it. In breaking up nuclei, I found it very convenient to make an upper story and place the frames with all adhering bees therein; there was no confusion nor quarreling. Some combs that had chilled brood were entirely cleaned out, and are as perfect to-day as ever. About half of my hives use the Langstroth frame, but I prefer a frame 15 inches long by 9 deep; the top of the hive will take the Langstroth rack, frames above, in false ends. To save my perfect surplus combs, I have a box, no top or bottom, ½ of one side, with hinges and a bottom, a loose top, with 6 square holes to take the upper story of the hive. The frames hang on false ends ½ inch apart; when full, lay empty burlap sacks on top, and cover on them. Burn sulphur often enough to kill the moths. I have used this method several years, and save the combs. Imperfect combs make into wax. J. D. Enas.

Napa, Cal.

What Hive to Use.—1. What is the simplest and easiest hive to make and handle for a beginner? 2. Can you give me the dimensions of such a hive, and size of the frames? 3. What kind and size sections to use in said frames? 4. Must the inside of frames and sections be dressed? 5. What is the best prevention against bee moths? I am ranching in Western Texas, and every farmer and stockman has from two to a dozen colonies, but their ignorance of everything pertaining to the bee is truly sublime, therefore I hope you will answer the above questions in the next issue of the Bee Journal. Lynn B. Ladd.

Medina, Tex.

[1. Any of the standard hives are simple and easy to handle—either the Langstroth, American or Gallup.

2. Langstroth hive is 18⅜ inches long, by 14 wide and 9⅛ deep, inside measure. Frames are 17⅝ by 9⅛, outside measure. Top-bar 19⅛ inches long.

3. The brood frames hold 8 sections each, 4¼x4¼ inches, called one-pound sections. This hive is also used with a 7-inch cap or cover, and will accommodate 18 two-pound boxes, 5¼x6¼ outside. The standard Langstroth contains 10 brood frames, or 7 section cases.

4. Sections should be, but it is not necessary for the brood frames.

5. Italian bees. If you have black bees, moths will not trouble so much if colonies are kept strong.—Ed.]

First Experience with Italian Bees.—I have kept bees for several years, and never had very good success with them till I was in Toronto, at the exhibition, and by chance came across Mr. Jones, of Beeton, Ont., and had a short conversation with him. The next spring I purchased one of him. The next spring I purchased one of his movable comb hives for a pattern, made new hives and transferred my bees into them. I purchased "Cook's Manual," and made myself acquainted with the management of bees. I then became anxious to get Italians, and bought 8 queens at $1 each; 4 of them died, the remaining 4 have done very well. I then purchased 2 more at $2.50 each. One was dead when received, and the other died 2 hours after introduction. But I was not discouraged, and purchased 6 more queens which all did well, and a healthier lot of bees than they are I think would be hard to find. My bees have wintered well. I wintered in three different styles, and may give my methods in the Bee Journal at some future time.

Stirton, Ont. J. Hambly.

Queenless Colonies.—After unpacking my bees I find two colonies are queenless, both blacks. One had drones hatched, more capped, and some not capped, but not a sign of worker brood. The drone brood was confined to the drone comb, a patch about 4 by 6 inches, being all the drone comb there is in the hive. I gave them a frame of worker and drone brood from another hive, but they are starting no queen cells. I have been in the bee business some time, but never had anything happen like it. What is the matter?

Bryan, O. H. Hance.

[There are two solutions of the enigma: 1st. The queen may have been old or been injured in some manner, becoming a drone laying queen, and killed or died quite recently; 2nd. The queen may have been lost some time ago, and a fertile worker developed. The fact of the drone brood all being in a small piece of drone comb, would indicate that the former hypothesis is correct; while their failure to start queen cells would disprove it, as a fertile worker will deposit her eggs anywhere. However, you can easily determine the matter. Remove the frame with the drone brood, also that which you gave them; then, if you *know* they have no queen, and eggs continue to be deposited, it is proof positive of the presence of a fertile worker.—Ed.]

Dreary Outlook.—More snow and ground frozen quite hard here this morning, with a cold northwest wind. Bees have gathered no pollen as yet; and do not seem as strong as they did a week ago. I do not know but I shouted "bees in good condition" too soon, for if this weather holds on long it will be hard on their rapidly decreasing numbers.

Borodino, N. Y., April 22, 1882.

Later:—Our cold weather still continues, and as I write the mercury stands at 18°, and the ground is frozen so it fairly rings as you walk over it. Bees are clustered as close as in winter, and with the exception of winter wheat, our fields look as bare as they did in February. If it does not warm up soon, some of my weaker colonies must perish.

G. M. Doolittle.

Borodino, N. Y., April 25, 1882.

Stray Swarm.—I would like to know what you think of the simplicity hive used on the Langstroth for making a second story, that is, those bevel edges like A. I. Root uses? Are they better than the Langstroth, that has the top to slide over the bottom hive? Do you think they will warp much and crack, so that ants, roaches and moths will get in? Those insects are harbored around my hives too much. Do you advise metal bearings for frames? Poplar and white clover are in bloom, and bees are gathering honey. I caught a runaway swarm to-day. R. H. C. Mitchell.

Humboldt, Tenn., April 21, 1882.

[The simplicity hive is virtually a Langstroth, and ought not warp much if properly made and painted. The bevel joint between would be a substitute for the square rabbet, and equally good for those who prefer that kind. We do not admire metal bearings for frames; but can highly recommend metal rabbets inside the hives for the frames to hang upon. —Ed.]

Cold in Massachusetts.—Weather has been very cold here for 10 days. Ice has made ½ inch thick for several nights. Very unfavorable for bees and queen-rearing. Early queens reared in New England will be rather expensive to the one who rears them. Some bee-keepers will expect to buy them for $1, notwithstanding the fact that they will cost $2. H. Alley.

Wenham, Mass., April 25, 1882.

CLUBBING LIST.

We supply the Weekly **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 60
Bee-Keepers' Instructor (W.Thomas)	2 50..	2 35
The 4 above-named papers	4 50..	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 7 above-named papers	6 30..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

Premiums.—Those who get up clubs for the Weekly Bee Journal for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

☞ When changing a postoffice address, mention the *old* as well as the new address.

THE AMERICAN BEE JOURNAL

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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

To Advertisers.—By reference to our schedule of rates for advertising by the year, it will be seen that considerable reduction has been made. This, in connection with our large and increasing circulation, makes it advantageous to dealers to avail themselves of its weekly visits to the bee-keepers of America to make their announcements for the coming season's trade. We not only offer the *best* advertising medium, but the lowest rates on yearly contracts.

◆

A Sample Copy of the Weekly Bee Journal will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ The Bee Journal is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

☞ We are sometimes asked who our authorized agents are? Every subscriber is such an agent; we have no others, and greatly desire that each one would at least send in one new subscriber with his own renewal.

The Apiary Register.

As the time is now at hand to commence the use of this valuable book, all who intend to be systematic in their work during the coming season, should obtain a copy and commence to use it.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the Bee Journal for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the Journal as fast as received. They will be sent post paid by mail for 75 cents.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

Advertisements intended for the Bee Journal must reach this office by Saturday of the previous week.

◆

☞ To any one sending two *new* Weekly subscribers for a year, we will present a volume of the Bee Journal for 1880, bound in paper covers. It contains much valuable information, and it will pay any one who does not already possess it, to obtain a copy. Many of our *new* subscribers will be pleased to learn that they can get it for $1.00, by sending for it *at once*, before they are all gone.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly Bee Journal for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

Honey as Food and Medicine.

We have just issued a new edition of our pamphlet bearing the above title. It has been revised and enlarged from 24 pages to 32, the new pages being devoted to *new* Recipes for Honey Medicines, and all kinds of cooking in which honey is used.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Bees and Honey, or Management of an Apiary for Pleasure and Profit. This is the title of our new book. The first and second editions having been exhausted, and being desirous of having it "fully up with the times," including all the various improvements and inventions in this rapidly increasing pursuit, we have thoroughly revised it, re-writing some chapters and adding several new ones, in order to present the apiarist with everything that can aid in the successful management of the Honey Bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth 75 cents; in paper covers 50 cents.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. This is a new pamphlet of 32 pages which we have just published. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

☞ This one fact is being brought before the minds of the people of the United States: Kendall's Spavin Cure is not excelled as a liniment. 18w4t

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 1, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 8c. for dark and 10c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax, on arrival; 18@22c. for medium grade, and 15@17c, for dark.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand for comb honey is slow, and prices nominal at 16@20c. on arrival. Extracted honey is in fair demand. Our jobbing prices for 1 lb. jars of clover honey are, per gross, $25; for 2 lb. do., per gross, $42. The demand for manufacturing purposes is very good. We pay 8@10c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for honey is light, most of the trade finding fault with the best offered, as it is more or less candied. Values are not steady, prices being made to meet the views of the purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

CLEVELAND.

HONEY—Our honey market would be good, as there is considerable inquiry for white honey in sections, with none to satisfy the demand. It would bring 22c. readily for choice. Buckwheat honey, no sale. Extracted, 11@12c. per lb.

BEESWAX—25@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—Scarcely any demand reported for honey; prices weak and little more than nominal.

We quote as follows: White comb, in small boxes, 15@17c; dark, in small boxes, 11@12c. Extracted, white, 9@10c.; dark, 7@8c.

BEESWAX.—Western, pure, 24@25c.; Southern, pure, 23@24c.

THORN & Co., 11 and 13 Devoe avenue.

SAN FRANCISCO.

HONEY—Sellers are more numerous than buyers. In fact, the latter are very hard to find. Comb of fair quality is seeking customers at 11@12c. Nearly 300 cases, mostly extracted, arrived this week, the bulk of which went to a packing house.

We quote white comb, 15@18c.; dark to good, 10@14c. Extracted, choice to extra white, 8@9c.; dark and candied, 6@7c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

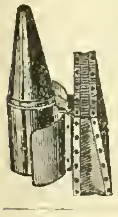
CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—In fair demand. Strained selling at 8@10c.; comb scarce—nominal at 21@22c.

BEESWAX—Stiff at 20@21c. for prime.

R. C. GREER & CO., 117 N. Main Street.



BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including the CONQUEROR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

Be SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian, Cyprian and Holy Land Queens and Bees.

J. C. & H. P. SAYLES,
4sm15t Hartford, Wis.

NOW-READY, LAKES CIRCULAR
ITALIAN BEES & QUEENS
HIVES, SECTIONS, FEEDERS &C
BALTIMORE
SUNNY SIDE APIARY

Stanleys' Vandervort Foundation.

We have just purchased a large amount of bright yellow beeswax, and are now prepared to furnish comb foundation in any size, either heavy or light. Our old prices were based on the low prices of wax last year, but as wax has now advanced about 4c. per lb., and we have also made great improvements in our mode of cleansing the wax, we are obliged to advance the price of our foundation 5c. per lb., making now thin foundation, 10 feet per lb., 55c., and heavy foundation, 5 ft. per lb., 43c. If 100 lbs. is wanted at one time, deduct 2c. per lb. from the above list. We would advise our friends to order soon, as we look for a still greater advance in wax, and we can make much nicer thin foundation before hot weather comes. Send for samples to G. W. STANLEY & BRO.,
18w1t Wyoming, N. Y.

TO BEE-KEEPERS.

Having had so great a call for Hives and Supplies the past season, I have purchased steam power and machinery and fitted up a factory for the sole purpose of manufacturing Apiarian supplies. I am now ready to furnish Hives, Section Boxes, or anything in the Apiarian line, kept on hand or made to order. Having wintered my bees successfully the past winter, I will sell a few colonies at the following prices: Black bees, $6.50 per colony; Italians, $8.50; Italian Queens, untested, $1; tested, $2. Probably there will be no queens ready before June 1st. Bees per pound, $1.50; to those not used to introducing queens, it will probably be better to get a pound of bees with a queen, turn them loose on empty combs, or a hive filled with comb foundation, and they will build up to a good strong colony during the season. L. E. WELCH, Linden, Mich.

PRIZE QUEENS FOR 1882,
From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

Italian Bees for Sale.

I have for sale about 40 Colonies in 10 frame Langstroth hives. All are in prime condition, and have young queens. Will be delivered after April 20th. Price, for Italians, $9; a few good Hybrids, $1 less. Satisfaction guaranteed.
15w4t JOHN F. DIPMAN, Fremont, Ohio.

MAPS AND CHARTS—$1,000 can be made in six months selling Tunison's Maps and Charts—36 page Catalogue free. Address, H. C. TUNISON, Jacksonville, Ill., or Columbus, O.
18w6tp

GERMAN
POULTRY AND BEE GAZETTE.

Deutsche Gefluegel und Bienen-Zeitung.

The only paper of its kind in America; 75 cents a year—sample copies 10 cents.

C. C. STUECKER, Publisher,
18mtf Louisville, Ky.

FOR SALE—10-inch Dunham Foundation Machine, good as new, $35. A. B. WEED,
18w1tp 75 Bagg Street, Detroit, Mich.

Complete Apiary for Sale.

An Apiary of 90 COLONIES OF ITALIAN BEES, with buildings and all modern appliances for running the same; are within 23 miles of Chicago, in a splendid location for wild pasturage. These bees show a good record for last season—2,064 lbs. comb honey from 43 colonies, and increased to 100 colonies. They are in prime condition now, with

PROSPECTS OF A GOOD SEASON.

I want to go into other business this fall, and would sell now, giving the purchaser the benefit of this season's work (and my services if wanted), as an inducement to buy. Terms will be reasonable, and partly on time if necessary. Correspondence solicited.

H. W. ANDERSON,
17wtf Gibson's Station, Ind.

FINE ITALIANS.

75 Colonies for sale. If you wish bees for work, send for prices.
SOUTHARD & RANNEY,
17w2tp Kalamazoo, Mich.

ONE-PIECE SECTIONS a specialty. Pound size, $4.50 per 1,000. L. Hives 50c. Also, Italian bees for $8 per colony. Circular free.
8sm12tp BYRON WALKER & CO., Capac, Mich.

1882. - ITALIAN QUEENS. - 1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby Smoker for $1.50. Address all orders to
L. J. DIEHL,
(Money Order Office)—Butler, Dekalb Co., Ind.
10wtf

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.
1w1y D. S. GIVEN & C., Hoopeston, Ill.

INQUIRIES
CONCERNING
THE CLIMATE,
Mines, Manufactories and Commerce
OF
COLORADO,

will be promptly and truthfully answered by private letter, upon sending One Dollar to the

Woman's Industrial Association,
15w6m 291 Sixteenth St., DENVER, COL.

CLOVER SEED

Owing to the increased demand for Melilot and Bokhara Clover seed, my liberal supply has been exhausted, and I can obtain no more in this country. I cannot, therefore, fill any more orders for either until the new crop comes in, and more can be imported.

Orders for Alsike and White Clovers will be filled promptly upon receipt.

A. H. NEWMAN,
16wtf 923 W. Madison Street, Chicago, Ill.

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
13wtf Abronia, Mich.

DUNHAM COMB FOUNDATION—35c. per pound; extra thin and bright, 10 sq. ft. to the lb., 45c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13w1y

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen....................$4.50
2-frame Nucleus, with Tested Queen.................... 5.00
Full Colony, with Tested Queen, before July 1......12.00
Same, after July 1...........10.00
Tested Queen, before July 1, 3.00
" " after July 1.. 2.50
" " per half doz., after July 1...................13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,
1wtf Burlington, Iowa.

FREE! FREE!

Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.
11wtf E. A. THOMAS & CO., Coleraine, Mass.

PAINE & LADD,

HALBERT E. PAINE, Late Comm'r Patents. } WASHINGTON,
STORY B. LADD. } D. C.
Solicitors of Patents and Attorneys in Patent Cases. 16w3m

KNOW THYSELF.

GOLD MEDAL Awarded the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self-Preservation;" bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only $1.25 sent by mail; illustrated sample, 6c; send now. Address Peabody Medical institute or Dr. W. H. PARKER, No. 4 Bulfinch st., Boston. 22w1y

QUEENS--QUEENS

Circulars free. Address,
15w6m **JOS. M. BROOKS,** Columbus, Ind.

HEADQUARTERS FOR THE

Golden Italians & Original Albinos,

BEES AND QUEENS.

Send for Circular. **J. M. C. TAYLOR,**
10smtf Lewistown, Frederick Co., Md.

1882-Southern Headquarters,-1882

For Early Italian and Cyprian Queens;

Imported and Home-bred; Nuclei and Full Colonies. For quality and purity, my stock of bees cannot be excelled. I make a specialty of manufacturing the Dunham Foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Catalogue, giving directions for introducing queens, and remarks on the New Races of Bees. Address,

DR. J. P. H. BROWN,
5amtf Augusta, Ga.

D. A. PIKE, Box 19, Smithsburg, Wash. Co., Md., breeder of those **Beautiful Albino and Italian Queens and Bees,** which gave universal satisfaction last season. Send for circular, 8sm6t

ANOTHER NEW IDEA.

Foundation all ready for business. Every sheet wired and bound around with a light wooden rim, ready to adjust instantly in your frame. No advance in price. Small sample for 6 cents. I shall also breed choice Italian and Holy Land Queens, practicing a new stimulative process. Write now for prices and particulars. Address,
9sm1y **JOHN H. MARTIN,** Hartford, N. Y.

MY 16-PAGE PRICE LIST of Italian, Cyprian and Holy Land Bees, Queens, Nucleus Colonies and Apiarian Supplies, will be sent to all who will send me their name and address on a postal card.
H. H. BROWN,
14smtf Light Street, Col. Co., Pa.

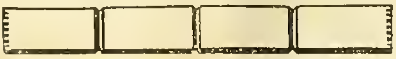
FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Langstroth Hives & Sections.



Lewis' Improved One-Piece Section.

Price $4.50 per 1,000, any size to 6x6.

No. 1—First quality, dovetailed, any size to 6x6, $4.50 per 1,000.

No. 2—Second quality, dovetailed, any size to 6x6, $3.50 per 1,000.

No. 2 is planed smooth one side, same as No. 1, but lumber is not as clean and white.

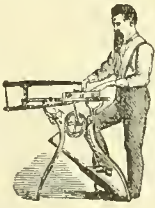
LEWIS' ONE-PIECE BOXES, of white Basswood, all sizes, VERY LOW. No charge for boxing or crating sections.

Send for new Price List.

C. B. LEWIS,
January 1, 1882. [1mtf] **Watertown, Wis.**

BARNES' PATENT

Foot Power Machinery



CIRCULAR AND
SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

READ THIS.

FIFTY YEARS AN APIARIST.

We are the oldest breeders of Italian bees and manufacturers of apiarian supplies in New England. Our experience dates back to the first experiments of Mr. Langstroth in the movable comb system. Send for our price list of bees, queens and supplies, before making your purchases for 1882. Address, **WM. W. CARY & SON,**
1m6t Coleraine, Franklin Co., Mass.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly,* to A. I. ROOT, Medina, O.

1882,--QUEENS--1882.

I am now booking orders.

Warranted Italian Queens $1.00, six for $5.00; Tested do., after June, $1.50. Cyprians, Unwarranted, $1.00, six for $5.00. Send for circular giving description and recommendation from Postmaster and county officers. Money order office, Versailles, Ky.
J. T. WILSON,
1mtf Mortonsville, Woodford Co., Ky.

Albino and Italian Queens,

BEES, AND

Supplies for 1882.

HEADQUARTERS for the ALBINO BEE.

If you have any taste for beauty, desire pleasure in working, and want large yields of honey, buy the Albino, for they are the "Coming Bee.' In order to meet the demand for Queens, I have increased my stock, and will be able to furnish several hundred per month after the 1st of May. Also, furnish Hives, Novice Extractors, and Apiary Supplies generally. Send for Price List. Address,

S. VALENTINE,
9m3t **Double Pipe Creek, Carroll Co., Md.**

C. Olm's Comb Foundation Machine.

☞ Send for Sample and Circular.
18mtf **C. OLM,** Fond du Lac, Wis.

1882. JOSEPH D. ENAS, 1882.

(Sunny Side Apiary,)

Pure Italian Queens,

BEES, COLONIES,
Nuclei, Comb Foundation, etc.,

Address, **Napa, Napa County, Cal.**
9m8t

HEADQUARTERS IN THE SOUTH

For the manufacture of
BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
5mtf **PAUL L. VIALLON,** Bayou Goula, La.

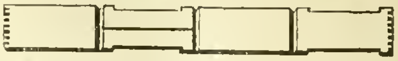
M. H. BIRD & J. LEE,

Milletts, Eaton Co., Mich.,
Have for sale

Pure Italian Bees,

at reasonable prices, COLONIES, QUEENS, NUCLEI. We solicit correspondence, and guarantee satisfaction in every sale. **BIRD & LEE.**
9m3t

HIVES AND SECTIONS.



We are in better shape than ever to furnish Bee Hives and Sections, having remodeled our machinery, and put everything in tip-top order for the coming season. We make a specialty of our

"BOSS" ONE-PIECE SECTION.

We have not sold any rights to manufacture, therefore we are the sole manufacturers in the United States. Send for Price List.

JAS. FORNCROOK & CO.
Watertown, Wis., Dec., 1881.

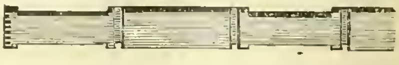
NOTICE—Some persons having infringed upon our Patent "One-Piece Section," we hereby give notice, that we shall prosecute all manufacturers. We shall not molest bee-keepers for USING those purchased before Dec. 1st, 1881, but hereby caution them against buying any except those bearing our stamp. It has been reported by some that it is our intention only to prosecute bee-keepers for using those One-Piece Sections heretofore purchased; this is wholly untrue and false.
JAS. FORNCROOK & CO.
Watertown, Wis., Dec. 15, 1881. 51mtf

CHAMPION BEE-HIVE MANUFACTORY.

One of the largest manufactories of Apiarian Supplies in the world.

BEE-KEEPERS.

I have made a reduction from 5 to 15 per cent. on all Hives, Section Boxes and Comb Foundation.



The above cut represents my all-in-one-piece section, which is made in thickness according to size. Try one box of these sections, and you will never use any other. Printed directions in every box, showing how to fold them. Last year I could not fill all of my orders for sections, but I have a large stock of them on hand at present. Give me a trial. Send for FREE price list

CHAMPION BEE-HIVE M'F'Y,
Newcomerstown, Tuscarawawas Co., O.
R. L. SHOEMAKER, Proprietor. 10mtf

ITALIAN BEES AND QUEENS.

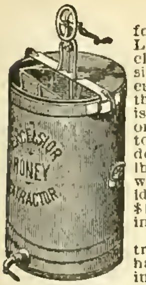
Full Colonies, Nuclei, Tested and Untested Italian Queens, bees by the pound. I guarantee safe arrival. Address, **OTTO KLEINOW,**
17smtf Opposite Fort Wayne, Detroit, Mich.

1882. Consult your interest, and send for my new circular and price list of colonies, Nuclei and Queens. Address,
9sm8t **S. D. McLEAN,** Columbia, Tenn.

TIN POINTS for GLASSING HONEY

Cut by machinery; are much cheaper and better than hand-cut, and perfectly straight; 1,000 to 5,000, 25c.; 6,000 to 10,000, 22c.; over 10,000, 20c.; 6c. per 1,000 extra by mail. Samples for 3c. stamp.
W. C. GILLETTE,
15sm5t LeRoy, Genesee Co., N. Y.

EXCELSIOR
HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets.

For 2 American frames,	13x13	inches	$8 00
For 2 Langstroth "	10x18	"	8 00
For 3 " "	10x18	"	10 00
For 4 " "	10x18	"	14 00
For 2 frames of any size,	13x20	"	12 00
For 3 " "	12½x20	"	12 00
For 4 " "	13x20	"	16 00

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
1wly Hamilton, Hancock Co. Ill.

We now quote an

Advance of 5 Cents per pound

on the PRICES PRINTED IN OUR CIRCULARS, wholesale or retail. 15wtf

---

$777 A YEAR and expenses to agents, outfit free, address **P O Vickery Augusta, Maine.** 36wly

J. V. CALDWELL,
CAMBRIDGE, ILL.,

FRESH MADE COMB FOUNDATION. —On and after the 20th of this month, prices will be: Dunham, 10 to 50 lbs. 37c., over 50 lbs. 36c.; Vandervort, 1 to 10 lbs. 47c., over 10 lbs. 46c.

SAMPLES FREE; also circular of other supplies. 3wly

1882-J. S. TADLOCK,-1882

LULING, CALDWELL CO., TEXAS.

Breeder of Pure Italian Queens. use one of J. H. Nellis' best imported queens. Tested Queen, $2.50; per half-dozen, $13.50. Select Tested, $3; per half-dozen, $16. No "Dollar" or nuclei-queens handled. Safe arrival and satisfaction guaranteed, if possible. 14w39t

Advance in Foundation.

The manufacturers of Comb Foundation have advanced the price 5 cents per pound, owing to the increased cost of Beeswax.

From this date, and until further notice, the price of all the styles and kinds of Foundation, except the VanDeusen (flat bottom), will be

Advanced 5 Cents per pound,

from the advertised price in my Catalogue.

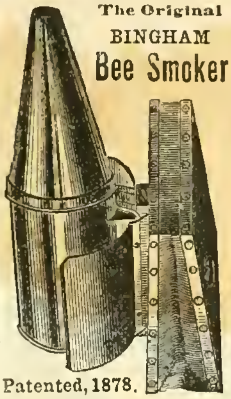
ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

"RED TAPE!"

Who will be the first to copy?

25,000 IN USE.

If you buy the Original Patent Bingham Bee Smoker, you will aid the inventor of improved bee smokers—get the best, that never go out—always please—never is complained of—the standard of excellence the world over—better and handsomer this season than ever before. Price per mail, postpaid, from 65 cts. to $2. Our patents cover all the smokers that will burn sound stove-wood, or do not go out. If you buy our smokers and honey knives first, you will have to buy no others.



The Original
BINGHAM
Bee Smoker

Patented, 1878.

PRICES:

	Handed to Customer.	By Mail, Postpaid.
Wide shield Conqueror, 3 inch	$1 75	$2 00
Large Bingham Smoker (wide shield), 2½ inch	1 50	1 75
Extra Bingham Smoker (wide shield), 2 inch	1 25	1 50
Plain Bingham Smoker, 2 inch	1 00	1 25
Little Wonder Bingham Smoker, 1¾ inch	50	65
Bingham & Hetherington Honey Knife, 2 inch	1 00	1 15

To sell again, apply for dozen or half-dozen rates.

Send for free description and testimonials, to
BINGHAM & HETHERINGTON,
17wtf **Abronia, Mich.**

Bees and Queens

FULL COLONIES of ITALIAN BEES,

From my Apiaries.

QUEENS and NUCLEI IN SEASON.

☞ Satisfaction guaranteed. Circular on application.
J. H. ROBERTSON,
50wtf Pewamo, Ionia Co., Mich.

4 RACES OF BEES. 4

FREE TO ALL—
21ST ANNUAL CIRCULAR.
HENRY ALLEY, Wenham, Mass.
17wtf

Italian and Cyprian Queens,

Imported and home-bred. Stock very superior. Also, hives of any of the leading patterns. State your wants and send for price list.

J. A. BUCHANAN,
17w2t Holliday's Cove, Hancock Co., W. Va.

Full Colonies of Italian Bees,

in the Langstroth frame, shipped in ONE-STORY SIMPLICITY HIVES, at $7 each.
15w4t **R. I. BARBER,** Bloomington, Ill.

Sixth Season DETROIT EVENING NEWS' EXCURSIONS

From Detroit to the Sea,

Via Grand Trunk R. R. and St. Lawrence River Steamers, through the THOUSAND ISLANDS and FAMOUS RAPIDS, to MONTREAL, WHITE MOUNTAINS, and SEA SHORE at PORTLAND, ME., near Boston; thence back to Detroit, via Quebec, Niagara Falls and Buffalo, **will leave Detroit July 5, 20 & 27.**

☞ $20.00 for the round trip of over 2,000 miles.

☞ Special trains on the G. T. R. R., and special steamers on the St. Lawrence River.

☞ Each tour personally conducted by W. H. BREARLEY, of the DETROIT EVENING NEWS.

☞ All tickets good to September 3d.

☞ Send 3-cent stamp for circular.

☞ A superb new Illustrated Guide Book, with descriptions and information, over 40 maps engraved especially for this edition, and a perfect copy of an oil painting, in 16 colors, of Glen Ellis Falls (near Glen House) for the first page of cover, will be sent to any address for 30 cents. Address—

W. H. BREARLEY, Office Detroit Evening News.

The Bee-Keeper's Guide;
OR,
MANUAL OF THE APIARY,
By A. J. COOK,

Of Lansing, Professor of Entomology in the
State Agricultural College of Michigan.

—:o:—

820 Pages; 133 Fine Illustrations.

—:o:—

This is a new edition of Prof. Cook's Manual of the Apiary, enlarged and elegantly illustrated. The first edition of 3,000 copies was exhausted in about 18 months—a sale unprecedented in the annals of bee-culture. This new work has been produced with great care, patient study and persistent research. It comprises a full delineation of the anatomy and physiology of the honey bee, illustrated with many costly wood engravings—the products of the Honey Bee; the races of bees; full descriptions of honey-producing plants, trees, shrubs, etc., splendidly illustrated—and last, though not least, detailed instructions for the various manipulations necessary in the apiary.

This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

—:o:—

Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—*L'Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—*British Bee Journal.*

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYNKOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—A. E. WENZEL.

My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—WM. VAN ANTWERP, M. D

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Buletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

—:o:—

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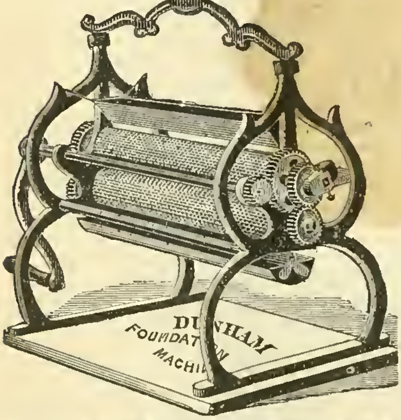

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Dzierzon Theory ;—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. **15** c.

Honey, as Food and Medicine, by Thomas G. Newman.— This pamphlet discourses upon the Ancient History of Bees and Honey , the nature, quality, sources, and preparation of Honey for the Market ; Honey as food, giving recipes for making Honey Cakes, Cookies, Puddings, Foam, Wines, etc; and Honey as Medicine, with many useful Recipes. It is intended for consumers, and should be scattered by thousands, creating a demand for honey everywhere. Published in **English and German.** Price for either edition, **6c.**; per dozen, **50c.**

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items 289, 290
Only a Slight Perversion 289
Things by their Right Names 299
The Prospect for Fruit 290
More Malevolence 290
Getting Up a Weekly Bee Paper 290

Among Our Exchanges—

Michigan State Convention 291
Hints to Beginners 291
The Detroit Convention 291
American Express Co.'s Money Orders 291
Bee-Keeping in Europe 291

Convention Notes—

Union Bee-Keepers' Association 292
Bee-Keeping for Profit 292

Correspondence—

Characteristics of the Coming Bee 294
Mrs. Cotton's Transactions 295
Results of Some Experiments 296
Care of Honey Locust Hedges 296
Denver, Colorado, as a Honey Market 296
Is Bee-Keeping Profitable? 297

Selections from Our Letter Box—

A Month Later than Usual 297
Bees in Canada 297
Bees in Louisiana 297
Thin vs. Thick Sections 297
Candied Honey 298
Not Flattering 298
Cold in Virginia 298
Honey for Bee Stings 298
Too Cool 298
Bee-Keeping in Dakota 298
Unprecedented 298
Swarming Commenced 298
Very Cold 298
Large Hives 299
Prospect Unusually Good 299
When to Divide 299
Shaken Loose 299
Taking Off Sections 299
Floating Apiaries Unprofitable 300
A Beginner 300
Feeding 300
Cold Weather 300
Grubs 300

Only a Slight Perversion.

From the May number of *Gleanings* we clip the following paragraph:

> Several of the friends have remonstrated because we have not replied to the unkind things that have been said in regard to dollar queens, and those who make a business of raising them. It is because I have a sort of feeling that the best reply we can make is to keep on raising and sending out extra nice queens, and they will do the talking, just as they have done all along.

Perhaps we should not have noticed the matter were it not for the innuendo so skillfully interwoven into it, and which cannot well be criticised without presuming it was aimed at the BEE JOURNAL. It is true we have felt impelled to warn apiarists against the apparent drift of sentiment toward cheaper stock, which we believe to be pernicious in its tendency, and a great mistake in an economic point of view; so, too, have we warned apiarists against the use and tendency of glucose; against pretenders with worthless hives; against "cheap John" schemes—in fact, against prejudices and errors of every description. The glucose traffic we have in general terms denominated fraudulent and dishonest, because its principal consumption has been under the name and guise of reputable articles, but regarding "dollar dueens," we emphatically deny having said "unkind things" about "those who make a business of raising them." Believing most of them to be honest and conscientious, we have endeavored to accord them the same consideration we desire for ourselves, and have studiously avoided personalities, to prevent involving others in the controversy against their wish. The hardest words we have published regarding *cheap* queens, have come from those who have been prominent breeders of them.

◆

Things by their Right Names.

The following paragraph we clip from a Western local paper, of recent date:

> I have just witnessed a most beautiful operation—the manufacture of foundation comb for the convenience of honey bees. By the use of this prepared comb the bee is ready almost instantly to commence the honey deposit.

The whole article is evidently written with an intention of calling attention to the bee-keeping interest, and exhibits a commendable spirit; but we most earnestly protest against inculcating false impressions in the minds of those unacquainted with the details of apiculture, eight out of ten of whom will imagine, after reading the above paragraph, that "foundation combs" and "prepared combs" are given to the bees to be filled with honey, and will foster the foolish belief which many entertain, that artificial comb honey is now on the market, and sold to a great extent to innocent consumers. Had the writer properly called it comb foundation, no false impression would be encouraged. Merely a slight transposition of words will make all the difference in the world in public opinion, and save much trouble in contradicting. Call things by their right names, and save misunderstandings.

◆

☞ We have received Price Lists of queens and bees from Henry Alley, Wenham, Mass., and of bees, queens and apiarian supplies from J. L. Bowers, Berryville, Va.

Getting Up a Weekly Bee Paper.

The editor of that excellent Monthly bee paper, the *Bee-Keepers' Instructor*, in the April number, remarks as follows on this subject:

"One of our correspondents, some time since, in the course of a very kind and encouraging private letter, wrote as follows:

"I was reading an editorial in one of my papers quite recently, that said 'editors are the hardest worked and least appreciated people in the universe.' I am afraid there is some truth in it. But there is a silent influence in every sentence written by these untiring workers, of which they have not the least conception; influences that improve and elevate the reader, help to make the world morally better, and help to advance science and scientific bee-culture. Many treasures of golden thoughts we gather from the pens of these noble men. God bless them every one!"

Since receiving the above letter, we have often thought over the passage quoted, and wondered if the majority of readers had as keen an appreciation of editors' work and labor as our correspondent, it occurring more recently to our mind while looking over the last volume of the AMERICAN BEE JOURNAL. And we felt curious to know how many among its subscribers had a just appreciation of the arduous labor required to conduct a publication like the JOURNAL successfully, and what a severe tax the editorial duties are on a person's time, strength and patience. To most people it probably seems a very simple matter; they receive their paper week after week, read it, and then toss it aside without once thinking of the hard work—expenditures of time and brains—required in its production. But to those 'behind the scenes' it is different, for they can fully appreciate, from personal experience, the amount of hard, unremitting, unceasing work that it has taken to elevate and keep the JOURNAL to the standard of excellence it has attained."

It is true that only a few ever think of the many weary hours spent in the production of the Weekly BEE JOURNAL. We have heretofore labored almost incessantly in the office and at our desk, and should continue to do so, were it not for the fact that our physical system can no longer endure it—and for the present we shall cease such labors at night. The BEE JOURNAL will, however, not be suffered to deteriorate from "that standard of excellence" which the *Bee-Keepers' Instructor* so kindly says "it has attained."

The Prospect for Fruit.—April, with its cold and unpleasant weather, was not very encouraging. So far, May is "like unto it," but we look hopefully to the coming days of this month. By our exchanges we notice that the small fruit is not injured much in this region. The Anna, Ill., *Farmer and Fruit Grower* says there will in all probability be enough to keep the usual fruit train running. The *Prairie Farmer* says: "Peaches in the Alton and St. Louis districts were somewhat injured, but of most varieties there will be a fair supply. Cherries promise well. Apples will be abundant, everywhere, unless something unforeseen befalls them. On the whole we look for an ample supply of the usual fruits in most localities throughout the Northwest." Vennor predicts a cool summer, followed by an unusually severe winter—but his recent failures rob the prediction of much of its weight.

More Malevolence.—It will be remembered that in the BEE JOURNAL for April 12, page 225, we stated that we had refused some articles from Mr. C. J. Robinson because he stigmatized Messrs. Langstroth, Miner, Howard, Cook, Kohnke and others as "cranks"—using personal abuse instead of arguments. In the *Bee-Keepers' Exchange* for May, page 121, he says:

"Newman in his A. B. J. held me up as a crank, because I reflected on the dealings between Parsons and the (U.S.)Department. Both Newman and Langstroth are probably dupes of the wiley Parsons," etc.

We refused to let him call our correspondents "cranks" and other abusive names—therefore we held him up as a crank! Such is his assertion—but it is wholly untrue!

In 1878 we were "introduced" to Mr. Parsons, while attending the National Convention in New York, but had no conversation with him then, and have never seen or heard from him since. It is silly to say we are his "dupe;" our only fault being that we will not use the BEE JOURNAL to condemn him, unheard, simply because one man sees fit to denounce him for something said to have occurred a quarter of a century ago, and of which we know nothing! If for this we are to be abused so persistently—let it come. Our consciousness of right will balance the account.

☞ We regret to learn that Mr. R. L. Shoemaker, of Newcomerstown, O., while manufacturing bee hives, was badly injured by a block of wood thrown from a rip saw which entirely took out one of his eyes, and otherwise disabled him. We learn that he is recovering, and just able to set up a little while. If this accident has delayed the execution of orders for material, of course this is sufficient excuse. We do not know of any, but perhaps some may have been delayed.

☞ A private letter from Mr. C. Tite, of Yeovil, England, and a copy of the *Western Gazette*, informs us that Englishmen are waking up to their interests, and that lectures on bee-keeping by gentry, clergymen and others are being delivered frequently in many parts of that country, and experts are giving public manipulations with bees, either in connection with the lectures or at times and places that are then announced. The prices for a swarm of bees varies from 10s. to 15s.; a colony of Ligurians (Italians) in a movable frame hive being about £2. The standard frame unanimously adopted by the British Bee-Keepers' Association is 8½x14 inches, outside, and will hold 6 sections 4x4¼ inches, which is adopted as the standard size of section for comb honey.

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

☞ "Mrs. Mayburn's Twins," with her trials with them in the morning, noon, afternoon and evening of one day, by John Habberton, author of "Helen's Babies," has already passed to a second edition. The New York *Sun*, in an editorial notice of it, says: "It is a most interesting, wholesome, and instructive picture of certain phases of married life. We commend it to the thoughtful attention of all young husbands. No better book has been published this year, than 'Mrs. Mayburn's Twins,' by John Habberton. All wives should own it, and all husbands should profit by it. It is published by T. B. Peterson & Brothers, No. 306 Chestnut Street, Philadelphia.

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☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

AMONG OUR EXCHANGES,

MISCELLANEOUS.

Michigan State Convention.—Mr. A. B. Weed gave an address before the Eastern Michigan Convention, at Detroit, on April 11, in which he criticises the State Convention in the following language, as published in the *Michigan Farmer* of last week:

The place for holding the next meeting was warmly discussed, and Kalamazoo was finally selected. Any locality where the Convention is held, can, of course, furnish a strong local representation, and unless the choosing of the next place is done in a spirit of fairness, a majority vote is apt to hold future meetings in its own neighborhood. In this case the location changed but 23 miles. The same influence is at work in the national conventions. If this thing is persisted in, it will, besides destroying the general features of the conventions, defeat in a large measure their intended object, and they will degenerate into local institutions.

* * *

Hints to Beginners.—A correspondent in the *Prairie Farmer* gives this advice to beginners:

Spring is undoubtedly the best time to start an apiary. The danger of loss in wintering is past, and bees have little brood and honey, so that they can be moved easily and safely. A person unacquainted with bees should beware of purchasing "a pig in a poke," as every hive containing comb and bees may not be a perfect colony. We may infer that a colony is all right if during the early spring months the hive is full of bees, as such a colony must contain a young, vigorous queen. It is a poor policy for a beginner to purchase black bees in boxes and gums, intending to transfer and Italianize. Such work as this barely pays in the skillful hands of veterans, and had better not be undertaken by novices. A better plan would be to select the hive of a desired pattern for the whole apiary, as the profit and pleasure derived from it consists, in a large degree, in having every part of each hive exactly alike. The life of many a colony of bees is saved by giving it a frame of brood or honey from a more prosperous one, and this could not be done if the frames and hives were not alike. If a person is not able to secure a strong colony in the hive preferred, then a new hive of the desired pattern might be taken to a bee-keeper, and a first swarm put into it.

Bee-keeping is a science, and not acquired in one day, by talking with a person "who knows all about bees." Therefore, to insure success commence slowly with not more than two colonies, and let your knowledge increase in like ratio to your bees. If you can make money with these, it will be safe for you to invest in more. It is absurd to suppose that a person who knows nothing about bees, except that they sting and gather honey, could manage a large apiary successfully.

* * *

The Detroit Convention.—In the *Country Gentleman* of last week, Mr. W. Z. Hutchinson gave some "notes" of the late Convention in Detroit, a report of which we gave on page 264. We extract the following items not in that report:

At this meeting nearly 1,000 colonies were represented. No essays were read, and there was scarcely any attempt at addresses, almost the whole time being passed in a conversational and sociable manner.

Both Mr. Robertson and Mr. Hutchinson hatch their queens in a lamp nursery. Mr. Robertson found it necessary to examine the nursery several times during the night, in order to cage any queens that might hatch, otherwise they would bite into cells and destroy unhatched queens. Mr. Hutchinson examined every cell about 9 o'clock in the evening, by holding it up before a light, and each cell that appeared nearly ready to hatch was cut out and placed in a cage by itself.

When the subject of artificial pasturage was brought up, Mr. M. H. Hunt, who lives near Detroit, said that he raises alsike clover, and had induced his neighbors to raise it by furnishing them seed at wholesale rates. After a farmer had given it a trial, he always continued to raise it. Mr. Robertson had not only found alsike clover to be an excellent honey producing plant, but it makes splendid hay, and is unsurpassed as pasture for stock. Mr. Robertson's bees had access to 500 acres of alsike clover. Mr. Hunt has an interest in an apiary located near D. M. Ferry's seed farm, and he found that the bees gathered enormous quantities of honey from the onion blossoms. This honey is of a green-glass color, and is nearly as good as white clover honey. Mr. Robertson had tried sweet clover, and, not finding it valuable, had plowed it up, and summer fallowed the field, which completely eradicated the clover. But he had lately seen so many favorable reports in regard to it, that he thought he should give it another trial. He thought that the season and locality might have an influence upon the honey producing properties of this clover.

During the discussion about the different varieties of bees, Otto Kleinow, of Detroit, raised quite a laugh by saying that honey boxes given, last July, to a colony of Syrian or Holy Land bees, were yet in the hive, the bees being so ferocious that it is impossible to remove the boxes. He had found that it is impossible to subdue this variety of bees with smoke. He had found them very prolific, but not more so than some of his Italians.

American Express Company's Money Orders.—The Chicago *Herald* of last Thursday gives the following item regarding these money orders:

The new money order system recently adopted by the American Express Company is working so advantageously that the Company has felt called upon to still further enlarge its operations. Heretofore money orders have been issued from each of the 4,000 offices scattered all over the United States, but at only comparatively few of these have paying offices been established. The Company has now determined upon making all of its offices both paying and issuing offices, and yesterday orders to this effect were issued by the President of the Company, Mr. Fargo.

* * *

Bee-Keeping in Europe.—Dr. E. Parmly, of New York, has sent us an article from the London *Globe*, which though mostly of local interest only contains the following:

During the present month an international exhibition of bees, of bee products, and of the apparatus used in bee-culture, will be held in Vienna. In England such objects are frequently exhibited at our agricultural shows, but only as minor supplements to machinery and farm produce. That Austria should devote an entire exhibition to it is significant of the high esteem in which bees are held in many parts of the Continent, and of the intelligent and widely diffused interest they excite. In Germany and Switzerland particularly, the bee is an important agent in the economy of a household; for in those countries honey is in far more frequent use than with us. The Germans hold periodical conferences on bee-culture, and the small towns, and many of the villages, have their bee societies, where notes are compared as to different methods of management, and the results of experiments are communicated. In addition to this, apiculture is taught in schools and colleges, as in Bavaria, for example, where it forms part of the course through which horticultural students must pass.

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Local Convention Directory.

1882. *Time and Place of Meeting.*

May 11—Champlain Valley, at Middlebury, Vt.
T. Brookins, Sec., East Shoreham, Vt.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset, Iowa.
Henry Wallace, Sec.

June 3—Hart County, Ky., at Woodsonville, Ky.

Oct. 5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

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Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

CONVENTION
NOTES

Union Bee-Keepers' Association.

The Union Bee-Keepers' Association met at the rooms of the Moody House, in Eminence, Ky., on the 27th day of April, President Dr. L. E. Brown in the chair.

After the transaction of the usual business of the Association, an invitation was given to any person present to become a member of the Association, and several names were added to the list. On motion, J. H. Reed, of Indiana, was made an honorary member of our Association. The President then delivered his annual address. He said the outlook for the future prosperity of the bee-keeper is not so bright at this time as it was before the severe frosts. Much of the early resources for honey was cut off. Nevertheless, the future is before us and an abundant white clover bloom may yet cause the bee-keeper to forget the late disaster.

Dr. E. Drane then addressed the Convention on the subject, "Are we profiting any one by our meetings?" The speaker took the grounds that no good had resulted from the foolish fashion of advising everybody to keep bees. He thought that bee-culture will pay only in the hands of those who are fitted for the occupation. None others should be advised to undertake it.

G. W. Demaree said he approved of every word of the speaker; yet, he could see much good resulting from our meetings. They are a pleasure to all of us, besides they educate the people, giving them a proper understanding of the products of the apiary. Our Association has contributed much to our good local honey market.

Mr. J. H. Reed, of New Orleans, Ind., said that the last speaker had demonstrated that it is possible to educate the consumers, as in the cases named.

Dr. Drane explained that while he thought it time lost to attempt to educate people to keep bees intelligently, he admitted that if you can induce a fellow to taste of honey, that will educate, for "honey is good."

Elder W. J. Mason being in the room, said if he was allowed to speak, he would like to say that he was quite an old man, and that he had handled bees for 40 years in the State of Missouri: he was satisfied that there was no hive as good to keep bees in as the common box hives with boxes on them. He knew that bees all died in Missouri in "patent gums."

The Secretary had a case of one-pound sections in the room, all primed ready for the bees.

President Brown arose and drew out one of the sections and held it up, with the thin foundation looking as natural as the handiwork of the bee, and explained its use; that tons of honey were being produced and sold for the cash—sent across the Ocean, everywhere—the result of improvements over the old box hive system.

G. W. Demaree said that his old friend was 40 years behind the times; that bees are always uncertain property in any kind of hive when not in the care of an intelligent bee-keeper, but are as easily reared and as certain in their life tenure as other beings created when properly managed. An old gentleman, Mr. Wooldridge, arose to inquire of the Association, "how they keep the moths from taking their bees?"

Mr. Reed, of Indiana, said "keep them out with Italian bees. They are proof against the bee moth.

W. T. Stewart said, "keep your bees strong and in a healthy condition, and they will take care of themselves.

Elder Mason insisted that there was a wide difference between the systems (as he heard it here) of bee-keeping in this State and in the State of Missouri.

Dr. Drane said that he had no doubt but our improved system of bee-keeping is essentially different to what it was in Missouri 40 years ago, or anywhere else. But intelligent, progressive bee-keepers in Missouri keep bees now—just like intelligent, progressive bee-keepers keep them in Kentucky or elsewhere.

The question box furnished the following questions: What is the value of a colony of bees in a box hive in April?

Dr. Drane said the queen is worth, at that time of year, $2; bees, $2; 10 lbs. of honey in bad shape, for feeding, $1; less $1 for transferring, the colony is worth $4.

Mr. Reed, of Indiana, said that he had not been in the habit of buying box hives, and believed the queen and bees to be worth nothing while in a box hive.

Mr. Demaree thought that a queen in a box hive was most likely to be a "scrub," and he would have no use for her but a short time, and would say that $1 was enough for her.

What is the value of a good colony of bees in a movable frame hive in April?

Dr. Drane said $10; if extra fine Italians, $12.

Mr. Demaree thought that a skillful bee-keeper can safely pay $10 for a good colony of bees in April, but he did not believe it will pay a novice to buy bees at that price.

President Brown said he gave $25 for his first colony of Italian bees, and he had realized $5.00 from the investment.

The Convention then adjourned to meet after dinner at Stewart's gallery.

AFTERNOON SESSION.

Convention called to order by the President, and the Association proceeded to elect their officers for the ensuing year.

Dr. E. Drane was elected President; Dr. Wm. M. Rogers, of Shelbyville, Vice President for Shelby County; W. T. Stewart Vice President for Henry County; G. W. Ashby Vice President for Jefferson County; G. W. Demaree, Christiansburg, Secretary, and Dr. L. E. Brown, Treasurer.

Dr. Drane then took the chair and said he was "pumped dry;" would only thank the Association for the honors conferred on him.

The discussion of the forenoon was resumed.

At what actual cost can a pound of honey be produced, in good marketable shape?

Mr. Demaree thought it as easy to answer the question as it is for the former to answer what it costs him to produce a pound of beef or pork. Of course locality had much to do with it, but he believed that he could produce it at an actual cost of 5 cts. per pound. It would take a high order of skill to do it. Honey is, therefore, worth at least 20 cts. per pound.

President Drane thought it could not be done.

W. T. Stewart thought he could produce honey at an actual cost of 5 cents per pound.

Mr. Reed gives his attention to queen-rearing, and was not prepared to say what could be done.

Mr. Ashby was not prepared to decide.

The following resolution was then adopted:

Resolved, That this Association tenders its thanks to W. T. Stewart, Dr. E. Drane, and the ladies, for the princely manner in which they entertained members of the Convention; and to the editors of the AMERICAN BEE JOURNAL, *Bee-Keepers' Instructor* and *California Apiculturist* for sample copies of their valuable papers; and to Mr. Holland for his presence in the interest of the Louisville *Daily Commercial*, and the *Henry County Constitutionalist*, and that copies of these proceedings be forwarded for publication to the *Farmers' Home Journal*, AMERICAN BEE JOURNAL, and *Bee-Keepers' Instructor*.

The Convention then adjourned to meet at Shelbyville, Ky., on the 5th day of October, 1882.

E. DRANE, *Pres.*
G. W. DEMAREE, *Sec.*

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Read at the Meeting of the Georgia State Agricultural Convention, in Augusta, Ga.

Bee-Keeping for Profit.

J. P. H. BROWN.

I shall not consume your time by dwelling upon the natural history of the honey bee, and upon the wonderful economy of the hive, but will proceed at once to consider the subject of bee-culture as a source of profit.

From the fact that the hive bee has been a subject of deep study by the learned in every age, and that apiculture has been successfully conducted by the ancients, it may sound strange to you when I tell you that it has only been within the last 40 years that bee-culture has been developed into a science by correct observations of the natural history of this insect, by increased knowledge of its proper mode of management, and by the introduction of the movable frame hive, the honey extractor, comb foundation, and numerous other appliances to make easy and to facilitate apiarian operations.

Comparatively few persons, outside of the business, have any correct idea of the amount of the honey product of the United States. From the latest and most authentic records, we find the amount produced in 1881 to be 100,000,000 pounds, worth at the present average selling price $15,000,000. This estimate falls a little short of the average, owing to the unprecedented drouth that prevailed that year.

Bee-farming is becoming a special business of no mean pretensions in many portions of our country, eclipsing, in the way of profits, many of your large cotton plantations. California takes the lead in the production of honey, and probably contains the largest producers in the world. J. S. Harbison, of San Diego county, has 3,000 colonies worked by 5 assistants; total product for the year 1880, 310,000 pounds; value, $31,000. The Hetherington Bros., of Cherry Valley, N. Y., come in second to Harbison. Root Bros., of Mohawk, same State, took the past season from 160 strong colonies in the spring, 32,809 pounds; while in the same State there are dozens of apiaries that yield respectively from 6,000 to 30,000 pounds. In the Northwest, there are hundreds of apiaries that run from 3,000 to 20,000 pounds. In our Southern country, comparatively little attention has been paid to the small rural industries. The assumed prestige that has always shrouded the little "cotton planter," awed them into background. There is more attention paid to apiculture in Florida and Louisiana than in any other southern States. Many apiaries in those States produce from 6,000 to 30,000 pounds of honey per annum.

Fully four-fifths of all the honey that goes to market is slung from the combs by a machine called a honey extractor, which consists of a large tin can containing a revolving frame to hold the combs, and which removes the honey from the cells by centrifugal force the same as water is slung from a grindstone when rapidly turned. Before the comb is put into this machine the cells are all uncapped by a knife made expressly for the business. By this arrangement the honey is secured at a great saving of comb, which is put back again into the hive to be again filled by the bees. The comb or wax the bees make from honey, and it has been determined that in making one pound of comb, they consume from 10 to 15 pounds of honey in its production.

The most of American honey finds a ready market in our large cities, where there are merchants who make a specialty of handling it. Hundreds of tons go to England and to the continent, and large orders for it have recently come from China and Japan. In our Northern and Western markets, the honey is all graded as to quality. Light shades, such as white clover, command the best price, running from 15 to 25 cents per pound for comb, and from 12 to 15 cents for extracted. The dark shades bring a less price, and are mostly consumed by manufacturers. Extracted honey sold at 10 cents per pound pays you as well as comb honey sold at 15 cents, from the fact that you can get fully one-third more honey from your bees when worked for the use of the extractor than when manipulated for comb.

In marketing honey it is very necessary, if good prices are any consideration, to put it up in convenient packages, observing all the conditions to have it neat and inviting in appearance. With many persons this latter requisite has more influence than prime quality. We in the South are too far distant from the Northern and Western markets to ship comb honey successfully—breakage and leakage would consume all the profits; but we can ship extracted honey at paying prices. For this object it should be put up in tight well made wooden kegs or barrels, of about 20 gallons capacity. This size is the most convenient to handle. Some shippers, in order to guard against leaking, wax their barrels on the inside by pouring in boiling wax and then rolling them around, by which means the inside is coated. I advise this precaution; for a barrel that may hold water, will not always hold honey, as the latter article has not the property of swelling out the particles of wood like water.

It is best for small producers to find a market as near home as possible. As a general thing home markets are the best, as they save freights and often commissions. I believe there are very few places where honey cannot be sold. A friend, both a physician and planter, located in a small village in middle Georgia, had been keeping bees for several years more for pleasure than profit, but last season he concluded to run them with a view to make them pay, and he found his dozen colonies of bees brought him more money than any two acres he had in cotton. Before this, he thought he could find no one to buy his honey, but after he put it up in nice shape and offered it for sale, he had no trouble to sell all he had at a fair price. Hence it is possible, with proper exertion and management, to build up home markets for honey. Thousands of pounds could be sold where now a few pounds are considered a great luxury.

Honey, instead of being regarded as a luxury by many persons, is becoming every year more of a staple article. One reason of this is, a waking up of the people to a realization of the fearful consequences of the adulteration of our syrups and sugars, by glucose and unwholesome articles, made by the action of acids upon starch. It can also be made by chemical process of old rags and woody fibre. Chemists tell us that fully 75 per cent. of glucose syrup can be added to cane syrup and 25 per cent. of crushed or pulverized glucose can be added to cane sugar with no risk of detection, by the ordinary consumer. It is easy, then, to imagine what becomes of a large portion of the thousands of tons of glucose that are manufactured every 24 hours by the glucose factories in the United States. Would it not be infinitely better, instead of eating commercial syrups of fancy brands that contribute to disease and death, to supply your families with pure extracted honey, the syrup that God distills in the laboratory of the flower?

Bee-keeping is like any other sort of business that is subject to failure and success. It does not follow, neither can it be supposed, that every one who takes hold of it is going to make it a success. In this business there is no such thing as that abstract something called "luck." Luck in bee-culture is always measured by "pluck," and by an observance of all those conditions upon which its successful prosecution depends.

First, it is all important for an apiarist to have a taste for the business, combined with the necessary knowledge or experience. He must possess a large share of that faculty that prompts to do things at the right time. Many persons will invest dollars in hives and fixtures, but not a cent in bee books and periodicals that impart information upon the instincts of the bee, and upon its most successful mode of management.

Secondly, the apiary should be located in a locality where there is an abundance of honey-producing plants. Honey is a natural secretion of the flower, and not a manufactured product of the bee as is usually supposed. Therefore, suitable flora is required, otherwise no yield of honey can be expected. In our Southern country, the best pasturage is usually found along our water-courses, where abound alder, maple, poplar, holly, sourwood, persimmon, black-gum, bay, etc., and many species of flowering shrubs and plants. All fruit blossoms yield more or less honey. In some seasons the cotton bloom secretes honey abundantly, which is of a light color and of good flavor. The flow of honey is always influenced by the sort of weather prevailing at the time. Too much rain will wash away the nectar, while during a protracted drouth the flow will stop. A very hot sun will evaporate the honey as fast as the nectaries secrete it. Hence, on such days, bees only go to the pasture very early in the morning and late in the evening. Bee-keepers should pay more attention to the preservation of their pastures, guard against its wanton destruction, and encourage its planting and growth. Much can be planted and sown that will have value besides the yield of honey. Prominent among this class, I may name fruit trees, cow peas, rape, mustard and the clovers. The latter can be grown on moderately rich clay soil, but will not thrive on sandy. The finest grade of honey is gathered from clover. Italian bees will work on red clover, while the common black bees will not. Buckwheat is very unreliable as a honey plant in our climate. Many extensive bee-keepers in the west find that it pays them to cultivate forage expressly for their bees.

Thirdly, the bee-keeper must avail himself of those appliances required to facilitate his business. No one can successfully manipulate his bees, and obtain perfect control over them, unless they are in hives that have movable frames. As the combs are built in these frames, and the frame so hung in the hive that the bees cannot glue them fast with propolis, they can be easily removed and every part of the comb examined. Any frame hive that will not admit often easy removal of the frames when filled with comb and bees is of no practical use in the apiary. The neatest, most convenient, and most profitable way to secure surplus comb honey, is in small frames or section boxes that hold from 1 to 3 pounds. These sections are nested and placed either above the frames in the brood chamber, or on their side. In our climate, I prefer the former arrangement. The introduction of comb foundation into the apiary has been an event of as great importance as the invention of the honey extractor, to which I have already referred. Comb foundation consists of sheets of wax, passed through a machine that stamps upon it the lozenge-shaped bases of the cells of the comb, and defines the bases of the cell-walls by heavy lines of wax. The bees have no new wax to make, but only to draw out the wax in the foundation given them into the complete comb. This is a great saving of time and material. By the use of this foundation colonies can be increased and built up into strong colonies with astonishing rapidity, and the comb will be beautiful and straight, a great desideratum in an apiary where it is often necessary to exchange frames of comb with other hives. If the combs are crooked and irregular, this exchange can only be done with great difficulty.

A few years ago an ignited roll of old rags, or a smudge, was the favorite appliance for generating smoke to subdue or quiet bees. The breath was used to blow the smoke upon the bees, but usually more found its way into your eyes and throat than any where else. Now, we have an instrument called the "smoker," made expressly to blow and convey the smoke to any desired part of the hive. This instrument is indispensable to every one who handles bees. For the protection of the face against stings, a bee-veil is necessary. Rubber gloves can be used to protect the hands, but after one gets accustomed to handling bees, the gloves are soon laid aside as useless.

In this paper I have endeavored to make plain to you that bee-keeping, as one of the rural industries, can be made profitable, and will pay a larger dividend upon the capital invested than any other farm pursuit. There is not a locality in Georgia where bees cannot be kept with a profit to their owner, if well managed; and when we take into consideration the extent of our State, and the small number of colonies of bees kept, we can safely conclude that there are tons of honey, worth thousands of dollars, lost annually.

As an agricultural people, we are too extravagant and wasteful. When we learn to take care of and economize these small blessings that God has showered around us, then will we be on the road to prosperity.—*Southern Cultivator.*

CORRESPONDENCE

For the American Bee Journal.

Characteristics of the Coming Bee.

A. R. KOHNKE.

Much has been said and written about the "coming bee;" but as to what it is to be, and to what an extent desirable points may be developed there seems to be but a vague idea. Hon. W. H. Andrews, of Texas, seems to be contented with our present attainments of Italians, whilst Mr. T. G. Newman wants further improvements, judging by what is said in No. 45 of the BEE JOURNAL for 1881. Mr. Newman mentions three desirable points, viz: 1st, a long tongue; 2d, prolificness; 3d, amiability; to this I would add, 4th, industry.

It should be borne in mind, that the first and second points refer to the body, and the third and fourth to the character of the bee, and of all these points No. 2 is to be a property of the queen exclusively, whilst 1, 3 and 4 are qualities of the workers only.

It will be conceded that there is a vast difference not only between the different races of bees with reference to the above mentioned points, but also between different colonies of the same race, which may appear to such an extent that black bees may do better than Italians. This experience probably induced Von Berlepsch to hold on to the German bee against the Italians, which latter he never seemed to fancy much, and up to this very day there are bee-keepers in this country as well as in Germany, who prefer the German bee, though as a rule the Italians will do better.

Before going into a discussion as to the desirableness or posibility of a further improvement of our best Italians, I beg leave to state some general laws of nature:

1. Nature preserves a certain symmetrical proportion of all the parts of an individual of her production.

2. Whenever such parts are changed or more developed by breeding or accommodation to changed conditions, so as to be out of proportion with reference to the whole body, it takes place at the expense of another part of that body, or the deterioration of the same part in a different direction. Whenever such deterioration is desirable conjointly with the development of such parts, it may be very profitable to not only develop but deteriorate by breeding as much as we can; but when the latter is a disadvantage, I think we had better stop and count the cost first, before we proceed.

To illustrate: Here is a kangaroo, large, powerful hind legs and tail, and insignificant fore legs and head; there is a giraffe, long fore legs and neck, and small hind quarters; here is a hare, long ears, short tail, small fore legs, long hind legs; there is a specimen of the bovine race from Texas, long horns and little milk; here the short horn and polled cattle, little or no horns, but rich milk and plenty of it. In pigs the large, heavy bones are bred out to get increase of flesh and muscle; and so on. I hope, the reader will understand and admit the validity of reasoning from these facts of nature, which go to prove that there is a certain limit of development of an animal's body, beyond which it would not be prudent to go, for it would not be practicable to decrease, for instance, the bones of a pig to such an extent that they could not support the animal.

Bees being no exception to this rule we can easily draw conclusions as to the coming bee. That they are no exception may be discovered by the following: Compare a worker and a queen. The latter has certain parts of her body more developed than the former, which development has taken place at the expense of other parts; for if we measure the length of a worker and queen, the extended tongue and sting included, we will find both of the same length; but on comparing corresponding parts of both, we find the worker has a longer tongue and sting, but smaller body than the queen, which, besides having a larger body, has the generative organs fully developed. Here is not the place to enumerate all these different developments of queen and worker to show and prove where one gained and the other suffered a corresponding loss, as enough has been said to prove the rule, that we cannot gain on one part of an animal's body without losing somewhere else.

Applying what has been said thus far, to all the races of bees, we will discuss now the desirable points.

1. Length of tongue. Can the same be increased? May be, it can; but are we willing to sacrifice the proper development of some other part of the bee's body? Will Prof. Cook, who takes a special interest in this part of the bee's body, please tell us whether or not the tongue of a bee gains, not only in length, but in diameter also, or if an increase of length is accompanied by a decrease of diameter. I am inclined to believe that the desirableness of a longer tongue is overrated. It is true, that if the bee had a tongue long enough to get the nectar of red clover it would certainly be an advantage; but red clover being the only plant for which the use of a longer tongue is claimed, furnishing nectar in abundance which at present blacks and most Italians cannot reach, is it not a mistaken notion to attempt to change our beautiful, amiable Italians for the sake of one honey plant? Besides, I think Alsike serves every purpose for which red clover is raised, if we only take the trouble to introduce its use with the farmer, leaving out of consideration that red clover may fail to yield nectar as well as other honey

plants; in some districts the main stay, white clover, quite often disappoints us.

2. Prolificness. This is a very desirable trait, and cannot be overlooked. But then, we have in this respect good and poor queens in all the different races, and it seems to depend more on the colony having plenty of young bees to rear a first class queen, than on the particular race; besides that, we are able to increase the prolificness of a queen artificially. But will it be desirable or advantageous to do so? It is a well known fact, that the prolificness of any organic body is in an inverse ratio to its life's duration. Any increase (natural or artificial) of prolificness in an individual or species is equivalent to a shortening of its life. This rule, if properly made use of, will hold good if inversed, that is, if by some means or natural tendency the average life of a species of animals is shortened, its prolificness will be increased. As to the prolificness of a queen there is another very important factor to be considered, which, as far as I can see, cannot so readily be governed, viz: The amount of semen entering the seminal sack of the queen, and the sooner with a fertile queen that store of life-giving cells is exhausted the sooner a queen will be worthless, though otherwise she may be in the prime of life. Hence it appears that there is a limit to prolificness.

3. Amiability. The Germans, in all their different shades, can be mastered by smoke; hybrids are rather irascible, and more so than the pure German bee; but the Italians may be handled without smoke, most of the time, with a little care; they become used to certain disturbances so that they will not take offense, when other bees do. Three years ago last summer, I saw a colony of Italians in New York, on Chatham street, near the postoffice, about 4½ feet elevated, but close to the sidewalk, being kept by a retail dealer of candy and ice cream. Crowds of people passing to and fro, not further than two feet from the hive, but the bees have never been known to sting.

4. Industry. This is a very desirable character of our bees. For if bees had all other commendable points and lacked in this one, we would derive not much benefit from them. It is generally admitted that the Italians are superior to the Germans in this respect, though some are not yet ready to concede it.

But suppose we had a bee as industrious as we would like to have them, it will not avail anything if there is nothing to be had in garden, field and forest. This leads me to dwell with particular emphasis on the necessary industry of the bee-keeper. Let him provide pasture for his bees if nature has not, and his honey pots and sections will be filled correspondingly. Let him scatter nectar secreting honey plant seeds, blooming at different times, and an entire failure of a honey crop will be a thing of the past, at least so far as plants are concerned. And we have all reason to believe that, if plenty of forage is supplied, the Italians will avail themselves of every opportunity to obtain the nectar. Look at the report of L. C. Root, in No. 49, vol. XVII of the BEE JOURNAL, what his best Italians did; the nectar was evidently there, and they got it, too. Do we want or can we expect anything better? Over 20 lbs. in one day; nearly a quarter of a ton up to Aug 27, from one colony.

It is claimed that the Cyprians excel the Italians, especially with reference to length of tongue, prolificness and industry; but are ferocious—much more so than the worst hybrids. Of course, the advocates of that strain concede this last character rather reluctantly, for reasons too apparent to be stated here. Personally, I have had no experience with them, nor do I wish to have any; the experience of persons not prejudiced or interested in any particular strain, is sufficient as far as I am concerned. It is not necessary for a man to go to Africa to find out that there are tigers and lions, and that they are rather dangerous animals; still, if a person takes delight in fighting tigers, lions or bees for their skins or honey, nobody can have any objection, if he goes where they are; but to breed and rear them in a civilized community where they endanger the life of people and domestic animals, is not desirable, and bee-keeping of that sort will before long be regarded a nuisance. That their temper is ungovernable when aroused, we have abundant proof from well known bee-keepers in this country as well as in Germany; in fact, in Germany their ungovernable temper is regarded as proof conclusive that the colony is a pure Cyprian. How the Michigan State Convention could, in the face of these facts, disapprove of the sentiment expressed in Mr. Marsh's paper, urging caution, I cannot understand.

This article is not intended to discourage further improvement in our bees, nor to belittle the meritorious efforts toward improvements by importation of foreign races such as Cyprians or Syrians; but I would discourage an indiscriminate cross between German, Italian, Cyprian and Syrian, and also warn against the disproportionate development of certain parts of the bee's body to the deterioration of others.

Youngstown, O.

For the American Bee Journal.

Mrs. Cotton's Transactions.

A. P. FLETCHER.

In the JOURNAL of Jan. 18, I saw my account of Mrs. Lizzie Cotton's frauds, etc. I remained in the northern part of the State all winter, and did not have the reading of the JOURNAL until I returned a few days ago. In regard to Mr. R. E. Holmes' offer to pay $5 to you or any one who will furnish proof of Mrs. Cotton's swindling, I would like to know what he means. Have not you, and has he not ample proof from many sources, that she practices swindling right along? To-day I heard Mr. Nathaniel C. Norton, of this place, a practical bee-keeper of the first class, read two quite lengthy articles from the New York *Tribune*, written by Prof. Cook, that reflected very strongly and directly upon Mrs. Cotton. Mrs. C. has advertised in that paper the same as she has in many other papers. The late Franklin Butler, editor of the Windsor *Journal*, once told me that Mrs. Cotton sent her advertisement to him for publication for three months, but sending no pay, he became suspicious, after inserting it a few weeks, that she was a fraud and took it out and sent her his bill, which she did not answer. What kind of proof does Mr. Holmes require—what more can he have than he already has? I sent to Mrs. C. for a bee hive, but before I sent the money ($4), I wrote her, asking the shape and size of her hives, and what kind of lumber they were made of, to which she replied that her "hive was 2 feet square, 1 foot deep, with thirty glass boxes top and bottom, and made of pine lumber planed on both sides." I sent the $4, and received what I called a model of her so-called "sample controllable bee hive." It was a very roughly made basswood thing, only 6 inches deep, and 6x10 inches inside. What is that but fraud? Mr. Holmes need not take my word for it, hundreds of others have received the same, no doubt. I can cite several. If Mr. Holmes means to do as he says, he cannot do anything less than to hand over $5 to somebody. He says: "I will give $5 for proof of money sent to her, and received, without returns being made." No doubt Mr. A. I. Root can furnish ample proof that he sent $1 for her book, and received acknowledgement, but never the book nor the money back. Is such the "returns" Mr. Holmes means? I received "returns" for my $4, in the shape of the "model" above referred to. The lady in Berkshire received "returns" for her $20, in the shape of a hive with a small swarm of bees—only a handful—on only 5 frames, when the equivalent could have been bought of her near neighbors for ¼ the price. I think that Mr. Holmes ought not to uphold Mrs. Cotton in her fraudulent transactions in the face and eyes of so many of her defrauded customers all over the land. Mr. Holmes says he does not think you have any right to say what you do about her, unless you are ready to prove "several instances" of what you claim. For conscience sake, how many more instances does he ask you to prove, in addition to the many already proven, before he is ready to come down with his $5? Mr. Holmes is very much like the gentleman from Connecticut, whom I met at Mr. A. I. Root's, who pretended to "know all about Mrs. Cotton," but on asking him a few questions, I found he had never seen her, or been at her place. He said she did not send me that little bee hive to swindle me, but she did it because she did not know any better; that she was as ignorant as a "horse-block," etc., and that the "old man" had been through bankruptcy and didn't amount to anything. Well, the piece before me in the BEE JOURNAL reads very similar to what that Connecticut gentleman said, and if he is the same, then I have had the honor of seeing Mr. Holmes. Mr. Editor, as you say, I consider myself worse swindled by receiving what I did, than as if I had received nothing, for it only added 95 cents to the price of the thing which was of no practical use. I cannot write anything about Mrs. Cotton without feeling "kind o' nervous." for I dislike swindlers.

Ludlow, Vt.

For the American Bee Journal.

Results of Some Experiments.

G. W. DEMAREE.

Last fall when wintering some queen-rearing colonies, I found one strong nucleus under the influence of a fertile worker—perhaps several of them, from the number of eggs that appeared in the combs. This colony, having had no young to feed and nurse for some time, and being without a queen, had filled three or four combs full of a mixture of pollen and honey. With this state of things, I conceived the idea of trying a double experiment—1. To see how long fertile workers are capable of laying eggs; and, 2. To ascertain whether or not these bees would winter safely on a mixture of pollen and honey. To this end I removed every comb that contained sealed stores, and put the bees on four frames that contained nothing but a mixture of pollen and honey. The preparation for winter was simply a division-board at the side, and two quilts spread over the tops of the frames. They reared drones in abundance at the start, but all signs of fertile workers disappeared by the middle of the winter. The experiment showed that worker bees do not have the vitality to lay eggs but a few weeks at most. These bees reared drones through the coldest part of the winter, having nothing but a mixture of honey and pollen to subsist upon, and came through the winter bright and clean.

Another experiment tried was of much interest to me, and is perhaps worthy of mention. In February last I discovered that a queen reared late in the fall had failed to "mate," and hence was a genuine drone-layer. She was quite prolific, but did not lay a single worker egg. There was a patch of drone cells near the center of the brood nest, and from these were hatched some as fine looking drones as any I ever saw. There being no drones in existence at the time except those sons of an unwedded mother, I determined to ascertain if it was possible to get a queen fertilized by them. I proceeded to destroy the unmated queen and gave the bees some larvæ just hatched, and they reared a queen and she was fertilized in due time. Of course such an experiment could not be conclusive, but all the probabilities are in favor of her having mated with one of these fatherless (?) drones.

It is generally believed that queens reared by small nuclei and such as hatch out in less than thirteen days, are necessarily inferior. I have always accepted this doctrine because of the reasonableness of the conclusion. I now have two queens reared by a one frame nucleus, in a glass case for observation, that are extra good queens. I also have a queen that is laying her third, if not her fourth year, that was reared by an ordinary nucleus, and hatched on the morning of the tenth day. I have had one nine-day queen that kept her hive full of bees for more than two years. These may be exceptional cases, but they have been quite numerous with me.

I am inclined to boast of two Cyprian queens (daughters of an imported mother) mated with black drones, that produce workers that will pass anywhere as first class leather-colored Italians.

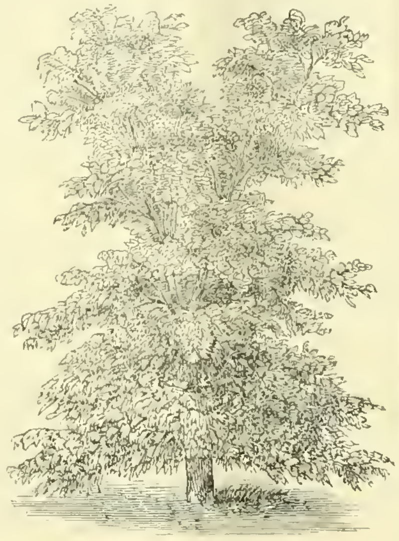
Christiansburg, Ky.

New York Tribune.

Care of Honey Locust Hedges.

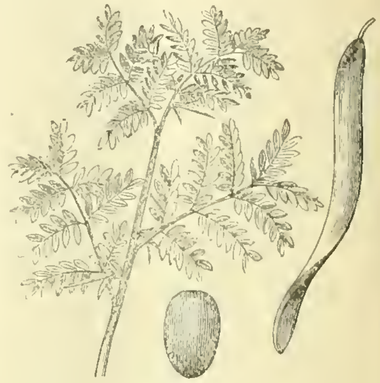
JOSIAH HOOPES.

In the Northern sections of the United States, where the Osage orange is more or less injured by the winter, the honey locust is undoubtedly the most valuable plant for hedging purposes. There is no special culture necessary for it, more than is required for other species, but it needs attention for the first 2 or 3 years to form a thick base. The young hedge should be frequently cultivated and kept clear of grass and weeds all summer, otherwise mice will harbor therein and bark the young plants. In trimming, cut well back for the first 2 or 3 years, bearing in mind there is no difficulty in quickly obtaining the desired height, but it is far more troublesome to induce it to become dense and twiggy.



Honey Locust Tree.

The best results are obtained from running one strand, or, better still, two strands, of barbed wire along the middle of the hedge, thus preventing the inroads of unruly animals, and that bane of the honest orchardist, boys with thieving propensities. To start at the commencement, honey locust seeds should be collected in the pods as they fall from the trees in autumn, and placed in a cold exposed position until hard, freezing weather, when they can readily be threshed like beans. After cleaning the seeds from the fragments of pods, etc., place in bags and preserve dry until spring. At planting time soak the seeds in warm water until they show signs of germination, when they should be sown in drills like peas, in good, thoroughly pulverized soil. Like the larger portion of our native trees, this species forms more root than top the first year, consequently one-year seedlings are usually rather small for planting in the hedge-row, but they should not be left to remain longer than 2 years, else they will be on the other extreme. The cause of so many poor hedges, however, is neglect in cultivation, and the honey locust of all others will not thrive without care and attention.



Honey Locust Limb, Pod and Seed.

[The honey locust makes a beautiful and hardy shade tree, and where alternated with other ornamental trees, presents a most attractive appearance. It is a good bloomer, and furnishes an abundance of light, rich honey. The instructions given above will furnish useful information for those desiring to cultivate it from the seed for a standard shade tree. We would prefer to transplant from the drills the second season. The timber is excellent.—ED.]

For the American Bee Journal.

Denver, Colorado, as a Honey Market.

C. A. CLARK.

The mildness of our climate is favorable, not only to the bee, but to the man who proposes to profit by its industry. This is my second winter in Colorado, and I have not yet seen the thermometer get down to zero as the lower extreme, nor up to 90° as the higher. The winter just closed has been milder than usual, snow not having fallen to the depth of 5 inches at any time during the season.

Forage for the bees is plenty, and the alfalfa grass, now becoming so popular, is as helpful to bees as a field of buckwheat. All the ordinary honey producers are plentiful.

Denver is one of the best of markets for honey, which brings 26 cts. per lb. the year round. The National Mining and Industrial Exposition, to be held in Denver, in August and September, may direct attention to this promising industry, especially if bee-keepers take interest in the subject, and aid them to do so.

Denver, Col.

Rural New Yorker.

Is Bee-Keeping Profitable?

G. M. DOOLITTLE.

My crop of honey produced during the season of 1881 was, most of it, sent to commission merchants, as I was not able to find a sale for it at prices which I thought it ought to sell for, hence the present time finds me hearing from the last lot which closes out my entire crop. The most of my crop was shipped in lots of about 300 pounds each to different commission men in New York, Boston, Philadelphia, etc., and sold quickly at 20 and 22c per pound, while the lot just closed out, which was shipped to a large dealer, together with a large consignment of my neighbors' on the co-operative plan recommended by some, brought from 12 cents per pound up to 20, thus proving that the co-operative plan is not always the best.

After placing the amount of this last sale on my ledger, it was but natural that I should look over the debit and credit columns to see what my bees had paid me for my season's labor. After footing up the whole receipts, and deducting therefrom the expenses incurred by the bees, I find I have an average profit of $29.63 for each colony I had in the spring. Thus, it will be seen, if a person can care for 100 colonies of bees (and it is done by many of our practical apiarists), it will give an income of $2,963 a year. But to be on the safe side, suppose we call it 50 colonies, these will give a salary of $1,481.50. I will admit that the season of 1881 was better than an average one for honey in this locality, and therefore to be sure and not get our figures too high, we will take off $481.50 from the above, when we have left $1,000 as an average yearly income for one person. As proof that the above is not overdrawn, I will say that I have cleared, on an average, over $1,000 from my bees each year for the past nine years with an average of less than 50 colonies each year.

That bee-keeping will compare favorably with any other pursuit in life I firmly believe, and the cause why so many fail in it is that they do not properly attend to it. Men will give their cattle and horses the best of care, but, when it comes to the bees, they let them take care of themselves, with the exception of hiving swarms and putting on and taking off boxes. What would they expect from their cows if treated in that way? The keeping of cows means milking twice a day for at least 210 days out of the year, and feeding them three times a day for 180 days to say nothing about cleaning stables and other work necessary to carry on a dairy. When men are willing to thus care for bees, they will find they will give a greater profit than can be obtained from cows, or any other branch of rural industry. Bee-keeping means work, energetic work, "a place for everything and everything in its place," and to know how to do things just at the right time and in the right place, if we would make it profitable. We also want the best bees, the best bee hive, and all the modern appliances, just as our enterprising dairymen would have the best breed of cows and the best utensils to care for the milk. A person will not succeed in any business unless he has enough love for his calling in life to induce him to be diligent and faithful thereto.

Borodino, N. Y.

[Mr. Doolittle's excellent article above touches upon a subject in which we have taken a deep interest—*i. e.*, marketing honey. We have long entertained a doubt as to the feasibility of co-operation in the matter of disposing of honey, and more especially as regards pooling the whole product in the hands of a comparatively few commission merchants or "middle-men." We could see no reason why the laws of commerce would be reversed for the especial aggrandisement of honey-producers, any more than for the dairymen, the wheat or corn growers, or the hog or stock-raisers; and we thought we could see many good reasons why the whole scheme was not only impracticable, but extremely visionary. Of course we had only one opinion, based, as we thought, on reason; nor, on the other hand, was there any proof positive opposed to our opinion by those advocating the scheme. Mr. Doolittle, however, in his first paragraph above cites practical, positive experience which strengthens our views, and is worth more than all the theoretical assertions which can be adduced. Perhaps adverse circumstances combined to force the unfavorable result upon him; but could the system be so perfected as to prevent abuses, or to revolutionize the laws of trade? We think not, when we consider the many conflicting interests to be reconciled, and the many expectant producers to be satisfied as to prices and speedy returns.—ED.]

SELECTIONS FROM OUR LETTER BOX

A Month Later than Usual.—Prospects are not very flattering in regard to the bee season here. It is a month later than usual. J. P. BASSETT.
Santa Barbara, Cal., April 28, 1882.

Bees in Canada.—Bees wintered well in this neighborhood and have been working since April 3d, whenever it was warm. There has been little loss from cold winds this spring. I spent last season with D. A. Jones, of Beeton, Ont. I have 75 colonies in box hives, all black bees, and intend to transfer all to movable frame hives, and put in Italian and Syrian queens. The fruit blossom prospects are very encouraging. Should summer rape be sown before or after fruit bloom? R. F. HOLTERMAN.
Fisherville, Ont., May 6, 1882.

[After fruit bloom; in your latitude from June 1st to 20th.—ED.]

Bees in Louisiana.—I put into winter quarters last fall 35 colonies in good condition, all in Langstroth two-story hives; used one thickness of cotton cloth, and one thickness of jute bagging as absorbents. They came through in good condition, with the exception of 3 queenless, which I doubled up March 1. I reared and had fertilized 10 fine Italian queens during April. Bees are now bringing in plenty of honey. Surplus arrangements are all on and rapidly being filled. I am working them for surplus, not wanting any increase. So far I have kept them from swarming. The flood did not reach me, as I had 4 feet more to spare. Some of my neighbors lost quite a number of colonies, but not quite all. Weather is dry and cool. The overflow is gradually falling, with no places flooded on the west bank of Bayou Teche in this parish. The cane crop is promising. W. R. THOMSON.
New Iberia, La., May 1, 1882.

Thin vs. Thick Sections.—Why do so many bee-keepers use sections 2 inches thick or more, thereby necessitating the use of tin to get straight combs? It is no trouble for me, and some others, to get full racks of sections filled with honey, and the combs all as true as a board, in sections not more than 1¾ inches thick without the use of separators; but when the sections are 2 inches thick, tin must be used or the combs will be crooked or wavy. We can also get at least ⅓ more honey without separators than with them, and as honey which is thin will evaporate and become thick much quicker in a shallow dish when exposed to heat, I hold that the bees will ripen and seal more honey in a good run in a comparatively thin comb than they will in combs with deep cells. Bees in chaff hives are doing well. O. H. TOWNSEND.
Kalamazoo, Mich.

Candied Honey.—I do not think it would dissolve to hang it in the middle of the hive, as the editor says; but lay the frame flat in some warm water, then turn over—use a shallow baking pan, for instance—the smaller the volume of water the stronger the fluid; don't take a sugar hogshead, it might make it too strong; uncap of course. We have fine weather to-day—80° in the shade. I see Mr. Doolittle reports cold weather in New York. Dr. Dzierzon, early this spring, said the last winter nearly resembled the winter of 1834, but wisely remarked, "We do not know what is in store yet for us." They had a mild winter in Germany, but lately it has turned cold there also. Dr. Dzierzon is nearly 71 years old, with a mind still clear and vigorous, and he has an article in every semi-monthly issue of the *Bienen-Zeitung* of Eichstadt.
T. HULMAN.
Terre Haute, Ind., May 4, 1882.

[We must confess we do not know what Mr. Hulman is alluding to in the first part of the above paragraph, but suppose he refers to removing candied honey from combs. We never said candied honey "would dissolve to hang it in the middle of the hive." We said, on page 264, "we would recommend to shave off the cappings and put the combs one at a time in the center of the brood nest. The bees will take out the honey, and liquefy and replace it in other combs." Mr. Hulman, however, suggests a plan for removing it from the combs, but we very much doubt whether he has tried it, or knows anything about its feasibility. Certainly its value, as honey, would be destroyed by the method he proposes, even though successful in removing it. We must question the wisdom of attempting to make corrections unless certain that error exists, and consider it almost impertinent to suggest a remedy we have not tried ourselves, or at least have good authority for presuming to be correct. Bee-keepers want truthful answers to their queries, or what has been proven satisfactory with others.—ED.]

Not Flattering.—As I have seen no reports of bees wintered in this section, in the BEE JOURNAL, I will say that, as a rule, they are in fine condition. My bees went into winter quarters about the middle of November, and the last of them came out April 27th. My loss was 6 out of 332—4 queenless and 2 deserted in the cellar, after about half were set out. The prospect for honey in this section is the poorest I ever saw on the 1st of May. Clover is nearly all killed, and that is one of the principal honey sources in St. Lawrence county. The season is about 10 days later with us than last year, as there is nothing in bloom at this date but poplars and a few willows that stand in warm places. Cloudy weather and cold winds prevail here every day, and freezing nearly every night.
IRA BARBER.
De Kalb Junction, N. Y., May 2.

Cold in Virginia.—Bees in this locality have wintered splendidly, and from April 1st to the 8th, they toiled from early morn till late at night, gathering large quantities of pollen and considerable honey. The weather was very warm and fine, temperature 74° to 78° in the shade, consequently brood-rearing was pushed to the utmost. I believe I never saw bees so crowded with brood in so short a time. But who knows what a day will bring forth? On the 9th we had a heavy rain, on the 10th snow, and next morning 12° below freezing, and we have had cold nights and raw winds ever since. Notwithstanding all this, the most of the bees are in fine condition, and I feel hopeful of a good honey harvest, as our main reliance is on white clover, which is in fine condition.
WM. BITZER.
Wheeling, W. Va., April 25, 1882.

Honey for Bee Stings.—Just this evening I read your Navarino subscriber's question on page 267 of the BEE JOURNAL, about the harmless insect, and wonder if it be the one I have often thought of writing you about. It is the same shape and build of a bee, but smaller, has four bands, all white, as also are all its markings, while the rest is jet black. I have noticed several about my hives. 1. Is it the same? 2. Has any one tried honey as a remedy for stings? It acts with me most satisfactorily, and is always convenient. Immediately upon withdrawing the sting, I place a drop over the wound with the tip of finger. It not only draws the poison, but destroys the odor, and this prevents the bees detecting it. In about a minute, or less, the pain is gone and the honey may be washed off. I am surprised that this has not been one among the many recipes already given. The late frosts have stopped the honey flow, but the bees themselves have suffered little, yet those who have neglected to feed may have a different story to tell.
Berlin, Ont. G. B. JONES.

[1. The fly is undoubtedly the same, and their general appearance so nearly resembles the lighter Italians that an unobserving person might easily mistake them for bees. While poised on a flower or leaf, however, their wings stand further apart, and are nearly level from tip to tip, instead of lying close to and covering the body, as do the bees' wings. Catch them and examine closely, they can neither sting nor bite.

2. We have used honey for bee stings, but have not found it effective. As bee stings affect persons differently, so undoubtedly will remedies, and where honey might relieve the pain and neutralize the poison with one, an entirely different remedy would be required for another.—ED.]

Too Cool.—My bees have been unable to gather either honey or pollen, thus far, this spring. Last year they gathered pollen on April 18. G. M. Doolittle's articles in the BEE JOURNAL contain so much practical knowledge that I find them very useful. There is more such knowledge to be found in the BEE JOURNAL than in any other bee-publication I have ever read. GILBERT W. DUNBAR.
Embden Center, Me., May 1, 1882.

Bee-Keeping in Dakota.—I had one colony of bees last fall that I packed in prairie hay, and I took them out last Saturday in splendid condition. Last summer I set a hive over the bees, full of honey, in which the bees died the winter before, and when I unpacked them they had both hives filled with bees and brood, so that I separated the hives and now have 2 strong colonies. I need your book to help me through with the care of them. My bees find plenty of pasturage, but I am going to help them to more by sowing alsike clover in my garden. W. W. EASTMAN.
Yankton, D. T., May 3, 1882.

Unprecedented.—The state of the weather here is something unusual. We have had frosts 22 nights in succession. On the night of April 29, ice formed ¼ inch thick on tubs of water, and killed all buds on fruit trees. To-day a cold wave struck us, and at 7 this morning mercury stood 2° below freezing, and now, at 11 a. m., it stands at 4° below—something never before known here in May. Bees bred up strong in April, but have not flown for the past 8 days. What will come of it? E. A. MORGAN.
Arcadia, Wis., May 1, 1882.

Swarming Commenced.—My bees are doing finely, and the prospects for a good honey harvest were never better. Swarming has commenced, and if the weather continues favorable, we will have a busy time through the season.
W. P. WEMYSS.
Clinton, N. C., April 29, 1882.

Very Cold.—The weather is very cold here this morning. My thermometer indicated 4° below the freezing point. Queens cannot be reared while the weather is so cold. When April came in we had a few warm days, and then all supposed we would have an early spring. A colder April was never known here, and I never knew it so cold as it is this morning, so late in the month. I fed my bees all through April to induce the bees to rear drones. Have taken some of my hives into my office some cold nights so that they would not "draw in" and leave the drone brood in the cold. HENRY ALLEY.
Wenham, Mass., May 3, 1882.

Large Hives.—With the Langstroth hive I see it recommended to use only 7 frames for brood, to induce bees to take surplus honey up into sections. Again, it is said for wintering crowd bees on 6 or 7 frames. 1. If all this be true, why not use a Langstroth hive of only seven frames, instead of 10? Some recommend stringing dead bees, a piece of black stocking, etc., suspended to a pole for bees when swarming, to cluster upon; we are also told that if a nail keg or box is put directly over a swarm of bees, when clustered, that they will go up into it. 2. Why not keep the box or keg over the decoy branch of dead bees, so that the bees, when they swarm, will get into the box themselves without any aid from the bee-keeper? If all this would work, I do not see why any swarm should be lost, for the bees, accepting the box or keg for their home, would be there when the bee-keeper came. G. M. ALVES.

Henderson, Ky.

[1. There are several successful apiarists who use 8-frame Langstroth hives, and one we know in Indiana who uses only 5 frames in the brood chamber during the honey harvest, but he uses 10 frames in building up. Last season we had a two-story Langstroth hive which contained 14 frames of eggs, larvæ and sealed brood at one time. The combs were not full, but certainly contained enough to moderately fill 10 frames. We think it better in breeding up, to employ all the frames that the queen will utilize; then, if necessary, cramp the brood chamber with division boards to force the bees to the boxes. This is perhaps more especially necessary with the Italians than with hybrids or blacks, as their attachment to the young is more marked.

2. Your scheme with swarms might work—we have never tried it. In the case of large apiaries, however, where several swarms frequently issue at once, much confusion would ensue from the doubling of several swarms in one box or keg. The keg is better than a box for running swarms into, as the roaring noise, which is so attractive, is much louder.—ED.]

Prospect Unusually Good.—The prospect for a large honey crop is unusually good with us. The cool weather has prevented the bees from gathering the usual amount of surplus honey from the fruit bloom, but it has staid in bloom double the usual length of time, and the bees have been able to gather a sufficient amount of nectar to keep brood-rearing up all the time. The result is an unusually large number of young bees in the hives for the time of year. White clover looks well, and I think will bloom 2 weeks ahead of the usual time. The demand for bees is the largest I have ever known, and the interest in bee-keeping is good in proportion. I have always run my apiary for honey, but have had so many calls for bees this spring that I have changed my plans, and will run the entire apiary for increase this year. I have heard of but 3 colonies of bees dying during the winter. I cleared over $300 from 16 colonies last year. I have never been able to supply the home demand for honey or bees, and I do not think I can for some time to come. I think many of our bee-keepers are too much afraid of selling bees near home, and allow others to supply their neighbors. I know of some such cases.

Rocklane, Ind. L. R. JACKSON.

When to Divide.—I have 2 colonies of bees. Took them out of the cellar about the 1st of April. They are in good condition and strong in bees—the bees covering nearly all of the frames, with brood in all stages of development. I am a beginner in the business, having obtained my first colony last July, after the swarming season was over. I wish to run my bees for comb honey rather than increase, and have determined to adopt the method of dividing suggested in your editorial, on page 210 of the BEE JOURNAL for 1882, as being the simplest and most easily understood of any I have come across; but the question with me is (and with other beginners in this vicinity), just when is the proper time to do it to subvert any future swarming? Will you please give some rule whereby a beginner can tell when to divide—a rule applicable to different latitudes and different seasons. By so doing, you will much oblige one, and probably many subscribers. J. M. B.

Morrison Ill., May 2, 1882.

[It will be a hazardous matter to fix an arbitrary time for making divisions, even in a single locality, and much will depend on the judgment of the apiarist, as it is a matter of frequent occurrence that some colonies will be very much stronger and more prosperous than others, and that, too, when the chances are apparently equal. Therefore, it does not follow that division is always practicable, unless the conditions are favorable, and no invariable rule can be established. We would, however, advise that when there are, say 7 or 8 frames of brood, larvæ and eggs in the hive, and if the weather be favorable, that when hawthorn (*Cratægus cordata*) is in bloom, the division be made. In case of plentiful fruit and spontaneous bloom, if the weather be warm and the nights not chilling, the division may safely and profitably be made when the Siberian crab is in blossom. This gives the benefit of most of the fruit for building up, and will generally give opportunity for rearing and fertilizing young queens before the usual week of wet, chilling May weather sets in, which in this latitude most frequently occurs during the last week. Let the division be made when it will, however, it will not do to leave anything to chance. Frequent examinations should be made as to the progress being made, and with a view to supplying feed, in case it should be needed.—ED.]

Shaken Loose.—"Open confession is good for the soul." I suppose I am beaten in the "best bees" controversy. It is now decided that nature made a hybrid that man and nature combined cannot improve upon. That traits of character in bees (different from all other animals) are not hereditary. That there is no use to breed for qualities, but for marks, and these marks are three yellow bands. By their bands ye shall know them. The days of "deeds" are past. American honey producers must now realize that bright yellow bees are the open sesame to success. For all this knowledge, together with the "'possum" story, are we indebted to the assiduous labors of Mr. G. W. Demaree, of Ky., my late victor. It is economical as well as comforting to discuss with a man who has not only the time and ability, but kindness to act as both chief disputant and judge.

JAMES HEDDON.

Dowagiac, Mich.

Taking Off Sections.—I see by dispatches from the Northern States, that you are still having cold weather. How strangely that sounds to us here on 29½° latitude. It is warm here and rather dry for April; our bees are storing honey now from horsemint. I took off box honey on April 12, stored from spring flowers. It is beautiful honey, and of very fine flavor. We have no wintering troubles here. A small swarm of blacks came to my apiary and settled on a limb Nov. 17; hived them on a frame of brood from Italians. They at once began to form queen cells (as they were queenless). The queen mated about Dec. 5, and began at once to rear brood, and now they are as fine a colony as any I have. Apiculture is coming to the front in this land of sunshine and flowers. Much has been said in regard to the viciousness of the Cyprians. We have them from a tested queen bought of B. F. Carroll. They are the most docile of any composing my apiary, which consists of pure Italians and hybrids. They are so much in favor with us by their good qualities in general, that we reared queens for our own use from them, rather than from the Italians. Climate, no doubt, has much to do with the different races of bees, as also with the yield of honey from various plants. Our country is healthy, and our crops are very fine. This is a fine farming country, and a splendid country for bees. Nothing troubles them here but ignorance. I suppose that is the name of it. It is indigenous with us. A good dosing with the AMERICAN

Bee Journal, I trust, will cure that malady. They do not possess it on purpose. All they require is teaching. I will strive, as soon as we see the crops are safe, to get you up a class. J. E. Lay, M. D.

Hallettsville, Tex., April 28, 1882.

Floating Apiaries Unprofitable.—One of our principal honey plants is the black jack, a vine which grows in our woods here in great abundance. They have been in bloom about two weeks, and will continue three weeks longer. The flowers are small, hang in clusters, and contain large quantities of clear honey. The woods are in a perfect hum with the bees, which are busy bringing in honey and pollen. Black jack is not the only plant from which the bees gather honey. There are hundreds of other plants and trees. Mr. Henry Steckle is feeding his bees. Mr. Garrett recovered 20 out of 70 colonies. He says he does not admire a floating apiary very much. His loss on bees and honey was about $865. C. H. Sonnemann.

New Iberia, La., April 28, 1882.

[The vine referred to is wrongly named; black jack (*Quercus nigra*) is a species of oak, growing usually very scrubby and barren. This vine is *Solanum dulcamara*, and frequently called bitter sweet. We have it growing in the Northern States, but it is not so great a favorite with the bees as in the South. If we mistake not, it is also called "tie-vine" in Arkansas, and other States South. The reference to Mr. Garrett's floating apiary will be explained by turning to Mr. Shaw's letter on page 265 of the Bee Journal.—Ed.]

A Beginner.—Bees are doing splendidly, regardless of the bad weather. They have been gathering pollen ever since in March. I purchased 7 very strong colonies this spring. They are black bees, wintered well, and are working well. The drones have been flying for three weeks. I expect early swarms. I am situated in a little valley, near a small stream of water; the woodlands are decorated with wild flowers of different kinds, on which the bees are busy at work. I think the coming season is very promising to bee-keepers, as nothing but the peach bloom has been killed. This locality affords an abundance of white clover every season. I am going to try the plan of sowing buckwheat the 1st of May, and at intervals throughout the summer, which has proved a success in former years. My hives are old-fashioned box hives, in which I believe, taken one year with another, bees will do better than in any patent hive made, unless they are different from any I have seen. I have known my neighbors to buy more than 30 patent hives, and lost all the bees they put in them except one colony. The Langstroth hive may be better—I have never seen one. Why is it that bees are killing off some of their drones this early in the season? I also want to know if basswood will grow well along creek banks, and what time to transplant? Frank B. Rife.

Malaby, O., April 27, 1882.

[They are killing off drones because honey is not coming in fast enough to feed them and the working population.

Basswood will grow well along creek banks if the ground is gravelly and filled with water near the surface, as is usually the case in the vicinity of running streams. Any time will do in the spring for transplanting basswood, if the leaves are not set. Probably for the next two or three weeks.—Ed.]

Feeding.—The cold weather has taken the early swarming fever out of our bees, and they have concluded to wait till a more convenient season. We have not lost hope yet of a good honey yield from poplar and white clover. These are our main sources of supply in Southern Indiana when colonies are strong enough to secure it. Judicious feeding is what should be done now to keep colonies up to their full capacity. W. C. R. Kemp.

Orleans, Ind., April 29, 1882.

Cold Weather.—The weather is quite cold yet. March 8th set in with northwest winds, which remained till the 17th, when the weather became warm so bees could fly again. They gathered pollen and some honey from the willows, and I had a chance to look some of them over. I found them in splendid condition, with brood in 6 frames, and capped drone brood in every colony I examined. I observed one colony where the bees flew very fast, so I opened it and was surprised to find they had started to build comb on the outside of the division boards. They had 2 pieces about 3 inches square. It has 8 frames of brood, and is as full of bees as in June. We have been feeding flour to our bees ever since they have been flying, and I never saw them work on it as they did this spring. I think that is what makes them breed so. The outlook for a honey crop is good. White clover looks better than last spring, and bees are in better condition. I think I will get considerable honey from fruit bloom. I think I can say, with Mr. Deane, "out of the woods," as there is plenty of brood to prevent spring dwindling. I wintered 26 colonies, and one nucleus with about a pint of bees, without loss. My brother had one colony. When he first put it out they flew all right in the day time, but toward evening fighting commenced, and in the morning, when we looked, there were about a pint of dead bees in front of the hive. We supposed they were robbers. The next day was cold, so we could not watch them, and he put them in the cellar again. When it again became warm he put them out, and we watched them, but could see no robbers around; in the evening they commenced fighting again, in the same way, and made it worse than ever—killing a terrible lot. That colony filled 8 spaces before, and afterward only 6, so it must have been their own bees. It is something new to us. If you know why it was, please let us know through the Bee Journal. H. J. Smith.

Burlington, Wis., April 27, 1882.

[Most likely robbers were at the bottom of the trouble, but not necessarily so. We have noticed, upon several occasions, the phenomena of bees killing members of their own colony, and accounted for it upon the supposition that they were either old bees, or that the colony was more numerous than convenience or necessity required, or perhaps their safety, and not being provided with the requisites for successful swarming, they adopted this plan for depleting their population. For some one who has the time at disposal and the inclination, this would afford an interesting subject for investigation.—Ed.]

Grubs.—I inclose two grubs. I found two hives that have them in. They are very active when you touch them. 1. Would like to know whether you have such travelers, and what you call them; whether they are very destructive? These I found in hives packed on summer stands, with sawdust filling. 2. Will old tin boilers, that are not rusty, do to press out for separators? 3. Are the perforated the best? A. L. Etherington.

Milton, N. S.

[The grubs sent are the larvæ of a small beetle, black in color, about ⅝ of an inch long. They subsist mainly on vegetable or wood fibre, after it has been long damp, and partly decayed. They are common throughout the United States, and are frequently met with underneath the bark of partly decayed logs and stumps. We do not think they are at all injurious to either the bees or honey.

2. So long as the tin is not rusted badly, it will not matter what it has been used for.

3. We doubt whether the perforated tin is enough better for separators to compensate for the difference in cost.—Ed.]

☞ Articles for publication must be written on a separate piece of paper from items of business.

Advertisements intended for the Bee Journal must reach this office by Saturday of the previous week.

Oldest Bee Paper in America
THE AMERICAN
BEE JOURNAL
Established in 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance :

For	**4**	weeks	....	**10** per cent.	discount.
"	**8**	"	....	**20** "	"
"	**13**	"	(3 months)....	**30** "	"
"	**26**	"	(6 months)....	**40** "	"
"	**39**	"	(9 months)....	**50** "	"
"	**52**	"	(1 year)	**60** "	"

Discount, for **1** year, in the MONTHLY alone, **25** per cent., **6** months, **10** per cent., **3** months, **5** per cent.

Discount, for **1** year, in the SEMI-MONTHLY alone, **40** per cent., **6** months, **20** per cent., **3** months, **10** per cent.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

A Sample Copy of the Weekly Bee Journal will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ The Bee Journal is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly Bee Journal for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the Bee Journal for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the Journal as fast as received. They will be sent post paid by mail for 75 cents.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

☞ This one fact is being brought before the minds of the people of the United States: Kendall's Spavin Cure is not excelled as a liniment. 18w4t

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., May 8, 1882.

The following are the latest quotations for honey and beeswax received up to this hour :

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 8c. for dark and 10c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax, on arrival; 18@22c. for medium grade, and 15@17c, for dark.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand for comb honey is slow, and prices nominal at 16@20c. on arrival. Extracted honey is in fair demand. Our jobbing prices for 1 lb. jars of clover honey are, per gross, $25; for 2 lb. do., per gross, $42. The demand for manufacturing purposes is very good. We pay 8@10c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for honey is light, most of the trade finding fault with the best offered, as it is more or less candied. Values are not steady, prices being made to meet the views of the purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

CLEVELAND.

HONEY—Our honey market would be good, as there is considerable inquiry for white honey in sections, with none to satisfy the demand. It would bring 22c. readily for choice. Buckwheat honey, no sale. Extracted, 11@12c. per lb.

BEESWAX—25@30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—There is virtually no demand for comb honey from wholesale buyers. Holders are anxious to clean up. Some dark and candied comb was sold this week at 6c. At any price there are few buyers who care to handle old comb. There is a limited demand for extracted, but only at very low figures. Sales of bright amber at 6½c.

We quote white comb, 12@14c.; dark to good, 6@10c. Extracted, choice to extra white, 7@7¼c.; dark and candied, 6@6¼c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

NEW YORK.

HONEY—There is no white comb honey in the market. We quote; Comb honey 11@16c.; extracted 7@11c.

BEESWAX—Scarce ; 26@27c.

THURBER & CO.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—In fair demand. Strained selling at 8@10c.; comb scarce nominal at 18@22c.

BEESWAX—Stiff at 21@22c. for prime.

R. C. GREER & CO., 117 N. Main Street.

Twenty-five Colonies of Italian Bees

At Nine Dollars each ; Ten colonies to one address, Eight Dollars each. Twenty Colonies of Hybrids at Seven Dollars each. These bees are in good, new, story-and-a-half hives, Gallup frames, 12 frames in a hive. In all respects in the best condition. **O. CLUTE,** Iowa City, Iowa.
19w2t

PAINE & LADD,

HALBERT E. PAINE,
Late Comm'r Patents.
STORY B. LADD.
WASHINGTON, D. C.

Solicitors of Patents and Attorneys in Patent Cases. 16w3m

HIVES FOR SALE—100 new Quinby pattern, standing frame, two coats of paint and sheet iron top. Been in use two seasons. Each hive contains 7 brood frames, 2 division boards, and complete side and top surplus arrangement, including tin separators. Price $1.50 each, in lots of 10 or more. **C. M. WOOLVER,**
Hallsville, N. Y.
19w1tp

Cyprian Bees
FOR SALE.

35 **COLONIES OF BEES**, having queens of last year's hatch, bred from a queen of the D. A. Jones importation. They are in J. E. Moore's improved double-wall hive of seven frames, with side and top storage.

They will be securely packed and delivered on cars from the 15th to 31st of May, at the following rates: 1 to 10 colonies, $8 each; 11 or more, $7.50 each.

Also, **50 New Swarms**, hived on finished combs, delivered on cars from 10th of June to 5th of July for, 1 to 10 colonies, $6.50 each; 11 or more do., $6 each. Reason for selling: The increase of our mercantile business prevents our giving the apiary the care and attention it should have. Remit by Registered Letter to

19w3t **J. E. MOORE**, Byron, Gen. Co., N. Y.

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **24c.** per pound, delivered here, Cash on arrival. Shipments solicted.

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL

Excelsior Dunham and Vandervort
FOUNDATION.

Owing to the large advance in the price of wax, I now quote prices thus: Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

J. V. CALDWELL,
3w1y Cambridge, Henry Co., Ill.

BEES FOR SALE.

60 **COLONIES**, in a neat two-story movable frame hive, at $6 per colony. Nearly all Italians. For further particulars apply to

E. CARR, Leesville P. O., Gonzales Co., Tex.
19w1tp

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65 *ENGRAVINGS*

The Horse
BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of receipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

Italian Bees, Queens and Sections.

Untested Queens, in May, $1.50 each; in June, $1.25; July and after, $1; per dozen, after July 1, $10. Sent by mail, with directions for introducing. Italian bees by the half pound, same price as untested queens. One 2 comb nucleus, without queen (Gallup frames), in May $3, June $2.50, July and after $2; 2-comb nuclei, with the standard Langstroth frames, 25 per cent. more. Sections—Planed dovetailed sections, 4¼x4¼x1¾, $4.50 per 1,000; 5½x5½x1¾, $5 per 1,000. Sections of this thickness do not need tins between them to insure straight combs, and the bees can ripen up and seal honey faster than in combs with deeper cells. See testimonials in March number of *Gleanings*. Please remit by P. O. money order, by registered letter, or by draft on New York or Chicago. Address,

O. H. TOWNSEND,
19mtf Kalamazoo, Kalamazoo Co., Mich.

4—RACES OF BEES—4

Italian, Cyprian, Holy Land and Hungarian Queens.—Warranted queens, $1.50; extra selected, $1.75; tested, $2. Send for my **21st Annual Circular.**

19wtf **HENRY ALLEY**, Wenham, Mass.

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

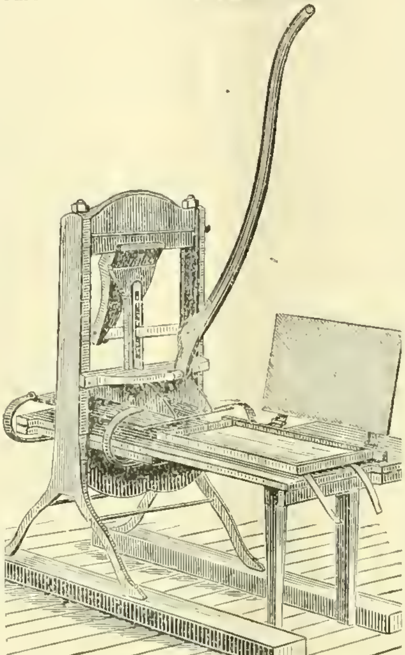
Complete Apiary for Sale.

An Apiary of **90 COLONIES OF ITALIAN BEES**, with buildings and all modern appliances for running the same; are within 23 miles of Chicago, in a splendid location for wild pasturage. These bees show a good record for last season—**2,064 lbs. comb honey from 43 colonies, and increased to 100 colonies.** They are in prime condition now, with

PROSPECTS OF A GOOD SEASON.

I want to go into other business this fall, and would sell now, giving the purchaser the benefit of this season's work (and my services if wanted), as an inducement to buy. Terms will be reasonable, and partly on time if necessary. Correspondence solicited.

H. W. ANDERSON,
17wtf **Gibson's Station, Ind.**



Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1w1y **D. S. GIVEN & C.**, Hoopeston, Ill.

1882-J. S. TADLOCK.-1882
LULING, CALDWELL CO., TEXAS.

Breeder of Pure Italian Queens. I use one of J. H. Nellis' best imported queens. Tested Queen, $2.50; per half-dozen, $13.50. Select Tested, $3; per half-dozen, $16. No "Dollar" or nuclei-queens handled. Safe arrival and satisfaction guaranteed, if possible. 14w39t

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1882.-ITALIAN QUEENS.-1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby Smoker for $1.50. Address all orders to

L. J. DIEHL,
(Money Order Office)—Butler, Dekalb Co., Ind.
10wtf

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
13wtf Abronia, Mich.

A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

Appreciative Notices.

Carefully prepared for beginners.—Farmers' Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner in bee-culture.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment.—Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

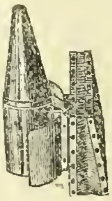
Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.



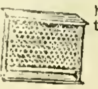
BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including the CONQUEROR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

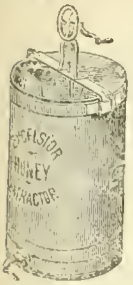
FLAT-BOTTOM
COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

EXCELSIOR
HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets.

For 2 American frames,	13x13	inches	$8 00
For 2 Langstroth "	10x18	"	8 00
For 3 " "	10x18	"	10 00
For 4 " "	10x18	"	14 00
For 2 frames of any size,	13x20	"	12 00
For 3 " "	12½x20	"	12 00
For 4 " "	13x20	"	16 00

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
1wly Hamilton, Hancock Co. Ill.

We now quote an

Advance of 5 Cents per pound

on the PRICES PRINTED IN OUR CIRCULARS, wholesale or retail. 15wtf

INQUIRIES
CONCERNING
THE CLIMATE,
Mines, Manufactories and Commerce
OF
COLORADO,

will be promptly and truthfully answered by private letter, upon sending One Dollar to the

Woman's Industrial Association,
15w6mp 291 Sixteenth St., **DENVER, COL.**

Advance in Foundation.

The manufacturers of Comb Foundation have advanced the price 5 cents per pound, owing to the increased cost of Beeswax.

From this date, and until further notice, the price of all the styles and kinds of Foundation, except the VanDeusen (flat bottom), will be

Advanced 5 Cents per pound,

from the advertised price in my Catalogue.

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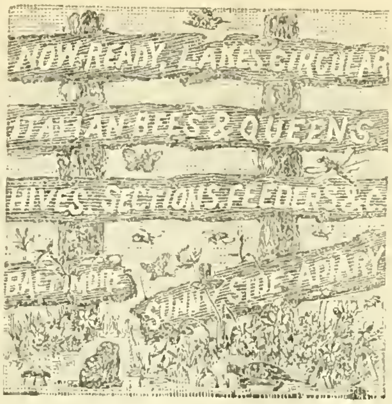

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—:o:—

Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—*L'Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—*British Bee Journal.*

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYNKOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

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It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Buletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To al taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist.*

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—:o:—

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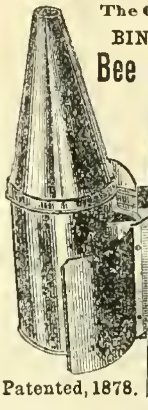

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Vol. XVIII. Chicago, Ill., May 17, 1882. No. 20.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items ....305 to 307
The Silver Lining of the Clouds............ 305
Early Swarms in England..................... 305
International Exhibition in Germany..... 306
North American Bee-Keepers' Society.... 306
Inventor of Broad Frames for Sections... 306
The Albino Bee Controversy................. 306
Bee-Keepers' Associations 307

Among Our Exchanges—

Honey Shows.......................... 307
The Weather and Feeding.................. 307
The Crafty Bee and its Sting.............. 307
Introduction of Italian Bees in England.. 307
The Honey Prospect 307

Correspondence—

Care of Comb Honey—No. 1................ 308
Reply to Mr. Clarke....................... 308
Wintering Bees in Clamps 309
Fastening Foundation in Sections 309
Bee Forage of Southern Texas............. 310
Shading for Bee Hives 310
The Functions of Queen Bees........ 311

Convention Notes—

Utah Bee-Keepers' Convention 312
Pasturage or Forage for Bees 312
Tuscarawas Valley, O., Convention........ 313

Selections from Our Letter Box—

Drone Trap................................ 313
Promising 313
Bees Doing Well in Wisconsin............. 313
Wintered Well............................. 313
Free Advertising.......................... 313
Waters Receded 314
Bees Doing Well 314
Rubber for Bellows Smokers 314
Wintering Bees 314
Still Cold and Cheerless.................. 314
Honey Harvest in Texas.................... 314
Wintered Successfully Again............... 314
Unusually Early........................... 315
Excessive Swarming........................ 315
Sweet Clover 315
A Prolific Queen.......................... 315
Bees in Utah.............................. 315
Well for Philadelphia 315
An Abundance of Bloom..................... 315
Rearing Queens 316
Bees Light 316
Bee-Keeping in Colorado 316

The Silver Lining of the Clouds.

We have had much unfavorable weather recently—cold, chilling rains and northerly winds prevailing in the Central States, with frequent heavy frosts and snow flurries in the Northern and Eastern. During all of last week the weather was not only unfavorable for the farming interests, but bees also have suffered as well. Many colonies bred up especially early and quite strong, have consumed their stores voraciously, while those not bred up have dwindled till now very weak. One lot of a car-load located in this vicinity, shipped from Arkansas about the 20th of March, were very strong upon arrival and heavy with honey, having been wintered in two-story hives well filled with stores. In the eight weeks since shipment they have become greatly depleted in numbers, and have not only consumed all their stores, but it has been absolutely necessary to feed largely to prevent starvation. We must deeply impress upon all to look well to the condition of the bees—see that they are amply protected from cold and dampness, and are always provided with a future supply of honey, syrup or good candy, until settled weather shall have arrived; it will be found much more satisfactory to remove with the extractor a few pounds of honey that may be left over from feeding, at the beginning of white clover bloom, than to build up the starving remnants of colonies, or store away the empty hives which have been depopulated through sheer neglect to provide food when needed most.

The experience of this spring again raises the doubt, whether it is most advisable to breed up colonies very strong till continuous mild weather has arrived—whether a prospective fruit surplus will recompense its more frequent failure?

But the provident, patient apiarist can realize no cause for despondency in our present disagreeable weather. A good surplus honey crop from the fruit trees is most frequently followed by a light yield from white clover. The prevalence of dry, hot weather during fruit bloom retards the spread and matting of the white clover rootlets and dwarfs its growth, thereby lessening the quantity of bloom and its duration. An examination this morning (May 13), revealed an unusual vigor in its growth and development in this locality; and the dandelion clumps, which usually give their blossoms only in succession, reveal scores each of flowers, which await but the sun's enlivening rays to burst forth in myriad discs of seeming gold, reflecting back its welcome from their emerald surroundings. Nor does the season forebode a repetition of last summer's drouth, to withhold the summer and fall bloom till too late to be harvested with profit; but everything is yet hopeful for the best. Get the bees in shape to take the fullest advantage of a bountiful honey bloom. It is said "every cloud has its silver lining," and we believe the despondency and gloom of the present will be transformed into mirth and gladness in the "*sweet* by-and-by."

◆

Early Swarms in England.—The London *Horticultural Journal* says that Mrs. Wain, at Walton-on-Thames, had a very strong swarm on April 21, and expected others the next day, had not the weather become showery and windy. The surplus sections have been on a month and are partly filled with comb.

International Exhibition in Germany.

We have received the following circular from the Executive Committee of the proposed International Congress to be held in Germany in July, 1883, which will explain itself to our readers:

In consequence of the many suggestions which have been put forward, the undersigned have combined for the holding at Hamburg, in July, 1883, of an International Exhibition of animals connected with agriculture.

Looking back to the acknowledged benefits to the farming interests which resulted from the first International Agricultural Exhibition which was held here in 1863, and which was also the first of its kind held in Germany, the undersigned are strongly of opinion that a repetition of the undertaking, after a lapse of 20 years, will be productive of similar service to the agricultural world, especially as the opportunity of international comparison, as well as competition, will be offered thereby, through the extensive progress which has been made in breeding during the last two decades.

Parties interested in this matter in all countries, are therefore cordially invited, both to take part in and to visit this Exhibition, which will be held in July, 1883, and will comprise the following departments, each of which are presided over by Special Committees:

1. Horse breeding (including mules and asses).
2. Cattle breeding.
3. Sheep breeding.
4. Pig breeding.
5. Bee-culture.
6. Pisci-culture.
7. Poultry breeding.
8. Stables, tools, etc., for the different branches of cattle breeding.
9. Scientific aids to the above.

By particular request of the Provisional Committee, the editor of the Weekly Bee Journal has consented to take charge of the American bee interests at that Congress, and hopes to have the cordial co-operation of all American breeders. If we can breed up the "coming bee" and there exhibit it to the World, it will be an achievement worthy of the best endeavors of the present generation of bee masters. This is an opportunity for the sinking of all petty animosities and rivalries for the general good, and we hope that it will be accepted and improved as such.

The circular further says that "the Senate of Hamburg, as well as the Prussian Minister of Agriculture and Forests, have kindly promised to give the exhibition their cordial support, and an executive committee has been formed for the carrying out of the Exhibition."

We shall keep our readers informed of the progress of affairs in connection with the proposed Exhibition, and will be glad to receive suggestions and opinions concerning the American display from breeders—all of whom are invited most cordially to correspond with us on the subject, either privately or through the columns of the Weekly Bee Journal.

◆

North American Bee-Keepers' Society.

We have received the following circular from Prof. Cook, which is worthy of careful perusal by the bee-keepers of America. As the time fixed for the assembling of the next Convention is rapidly approaching, its publication will not be considered premature, and may serve as a reminder to some who will require time for preparation:

State Agr'l College, Lansing, }
Michigan, May 11th, 1882. }

To the Vice Presidents of the National Bee-Keepers' Association, and the Bee-keepers of America:—I beg leave to call your attention through the several bee papers of the country, to the next meeting of our Association, to be held in the city of Cincinnati some time in October next.

All disinterested friends of apicultural progress will recognize the valuable work of the Association, and the greater good that may come, yes, and will come, when all our associations are harmoniously working together to build up our art. Those present at the last meeting at Lexington will recall the perfect harmony, and the perfect spirit of accord that prevailed during the entire meeting, and the feeling of real satisfaction that was manifested by those present from every section. Let us commence early to secure even greater fruits at the next meeting. With this end in view, I wish to offer some suggestions:

Let any one who wishes the character of the meetings changed in any particular, write to me at once, and their wishes shall receive earnest attention.

Let the delegates from each State come prepared to give accurate data as to the honey crop for the season of 1882, that we may be able to give the best advice as to the marketing of the crop.

Let it be remembered that committees were appointed to experiment in several lines, particularly in controlling fertilization, and let us hope that full and able reports will be rendered. Let others come prepared to add to the reports, and to discuss them.

In accordance with the general opinion, few and short essays will be read, that the discussions may be more full. With this in view, let every person come prepared to give quick and accurate accounts of what he has learned that will be helpful to the bee-keepers of the country.

Let us hope for a large attendance of the enthusiastic bee-keepers of the country, and that all may come full of the spirit of progress, good feeling and harmony, that the meeting may be great in the good that shall be accomplished, and entirely free from all harsh, uncharitable words, which, in no convention, tend to edification.

A. J. Cook, *Pres.*

◆

Inventor of Broad Frames for Sections.

Mr. H. H. Flick writes us regarding our answer to Mr. Friedemann Greiner, on page 258, as follows:

Are you not mistaken in the issue of April 26, page 258, about sections and broad frames? I claim the honor of inventing the frame to hold sections. By referring to the Patent Office, you will find that my patent covers the broad frame holding sections, which was dated on Sept. 21, 1869, and ante-dated Sept. 8, 1869, and numbered 95,100.

We cannot see wherein we made any mistake. Mr. Greiner inquired if *sections* were in use in this country before the year 1875, and whether it was so published in the Bee Journal of 1874 or 1875. Upon examining our back volumes we found several mentioned before that time, referring to them and reproducing the identical cuts used to illustrate the several inventions at the respective dates. We gave no one credit for originating anything except so far as indicated in the back numbers of the Bee Journal, and if Mr. Flick's invention was noticed or advertised previous to 1875, we overlooked it. We did not say those parties, or any of them, were the inventors of the broad frame, nor that Mr. Flick was not. We merely cited the cases on record to prove that sections were used in America prior to the time that they were claimed to have been invented in Germany. We would not intentionally deprive any man of credit to which he is justly entitled, and especially regarding so important a matter as the section case or broad frame.

◆

The Albino Bee Controversy.—Mr. S. Valentine, on page 199 of the Bee Journal, gave the origin of the term "albino," as applied to that particular strain of bees, and claimed to have been their originator as a fixed type; to this Mr. D. A. Pike rejoined in an article published on page 250, claiming at least a share of the credit. We have received still another communication from Mr. Valentine on the subject, but as both gentlemen have already been heard, and each made out a pretty strong case, we will have to let the matter rest where it is. It is not a question that interests the general reader, and no good will be accomplished by continuing it. We are more convinced than ever, that perpersonal controversies relating to business matters, when carried to any length through the columns of a public print, are not only in bad taste but frequently give rise to damaging impressions. We shall endeavor to discourage this class of correspondence as much as possible hereafter.

◆

Bee-Keepers' Associations.

It is exceedingly gratifying to observe the perfection of the bee-keepers' organizations in Utah, and many old States, with much greater pretensions in an apicultural point of view, could study and adopt their system with great profit. It will be seen there is a Territorial or head organization, with its President and general officers. Tributary to this are District or County Societies, each with its President and Bee Commissioner, and these make it a special business to inform themselves of the number of colonies in their respective districts, their condition, and the manner of treatment and care of bees, and success. They are also clothed with arbitrary power regarding foul-brood and other contagious diseases, and report all matters of general interest to the Territorial Association. By this system of thorough organization, all data bearing upon the production, condition, treatment, and prospects are easily arrived at, and the most practicable system of co-operation can be determined upon and effectively practiced.

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☞ The Irish Bee-Keepers' Association have adopted as its standard frame the same size as that of the British Association, and adopted a "resolution in favor of a journal exclusively for bee-keepers, and independent of trade influences, and promising to support such a journal if brought out under proper management." So says the London *Horticultural Journal.*

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☞ Our new location, 925 West Madison street, is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Honey Shows. — The *Northwestern Farmer and Dairyman*, of Portland, Oregon, remarks as follows :

The Irish Bee-Keepers' Association is to have space at the Royal Dublin Spring Cattle Show. Lectures will be given and, if the weather is propitious, the actual manipulation of bees will be freely shown by skilled apiarists. It will be a brief session of an apiarian school. And the *Prairie Farmer* well says: "Why cannot American bee-keepers take a hint from this and increase the value and interest of the bee and honey exhibits at our annual fairs? The bee-keepers should have a tent or building to themselves, where they can show their hives and other devices to good advantage, and where they can lecture, talk and instruct each other and the people in general, in bee handling and care."

In thus conducting the bee exhibit a great interest would be created and bee-keeping materially extended. This interest is too greatly neglected in this northwest, though Oregon and Washington are eminently well provided for successful bee-keeping, and there is no good reason why nearly all our honey should come from California.

◆

The Weather and Feeding.—The *Indiana Farmer* remarks as follows on the weather, fruit bloom, etc.:

The cool and unfavorable weather of the past few weeks has been quite detrimental to the bees. Very little honey was gathered from the fruit bloom. Many colonies will be short of stores, and must be fed to keep from starving, or if not so bad as that, they may entirely suspend brood rearing, losing weeks of valuable time. We are feeding our entire apiary of 150 colonies. It is not necessary to make syrup with which to feed, by boiling. Neither is it desirable that it be made thick. Sweetened water is all that is required at this season of the year. We simply fill a large extractor with water; scoop in sufficient sugar to make it sweet, stir until the sugar is dissolved and drawn off into the feeders.

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The Crafty Bee and its Sting.—The Boston *Journal* tells the following story concerning the sagacity of a bee:

A certain restaurant in this city, apparently to proclaim the unlimited resources of its cuisine, has in its show-window a huge tank wherein glittering gold fish, sullen horned pouts, dignified bull-frogs and sprawling turtles dwell together in a greater or less degree of amity. The other day a bee fell into the water and was solemnly gobbled by a goggled-eyed fish. Hardly had the bee been engulfed, however, when the fish was seen to be strangely excited. He leaped into the air, drew in great volumes of water and blew them out again, and acted so insanely that the turtles scuttled away in hot haste, and the frogs tumbled off the rocks to right and left in sheer consternation. Meanwhile the bee reappeared and crawled out of the tank in safety, evidently congratulating itself, as it dried its wings, upon its possession of a sting, and the presence of mind necessary to use it to advantage in an emergency.

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Introduction of Italian Bees into England.—The British Bee-Keepers' *Guide Book* gives the following as a scrap of history :

Italian Bees—This variety, sometimes called Ligurian, was introduced into this country in 1859 by Mr. Woodbury, of Exeter, from a small district amid the Alps, including portions of Switzerland and Northern Italy, where it is indigenous. Much prejudice existed against them at first, but now their superiority over the common black bees is almost universally admitted. The Italian bee is similar in form and size to the black bee, but lighter in color, and has three distinct yellow rings about the body below the wings. It is more prolific than the black bee, more active, working earlier and later, increases much more rapidly, is ready for swarming earlier, and gathers honey from plants which are not frequented by the black bee. Pure Italians are also of a more amiable disposition, and less inclined to sting, therefore they are easier handled. The introduction of Italian bees has done much to improve our race of black bees, by introducing new blood and correcting to a great extent the mischief which had inevitably resulted from long in-and-in breeding.

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The Honey Prospect.—Mr. L. R. Jackson gives his views on this subject in the *Indiana Farmer* in the following language:

The prospects for a good honey crop are unusually good in this section of the country. The cold weather during fruit bloom has prevented the bees from storing the usual amount of surplus honey, but at the same time it has kept the trees in bloom, twice the usual length of time and the bees have been able to gather plenty of the nectar, to keep brood rearing actively going on and I have never seen bees build up as much during fruit bloom as they have this spring. The white clover never looked better and it will be fully two weeks earlier than common. The mild winter with but little freezing and thaws has left the roots of clover and other flowers in a healthy condition. Basswood is almost sure to be good, and with us that is better for surplus honey than all other bloom, it being so plentiful and so sure to give a surplus.

CORRESPONDENCE

For the American Bee Journal.

Care of Comb Honey—No. 1.

G. M. DOOLITTLE.

As I intimated at the start when commencing these articles, that I would take up the text under the different heads: "Production, Care, and Sale," separately, so having spoken of production, my next or second part will be care. At the outset I wish to say that many seem to suppose that the producing part is about all there is to any branch of business, which supplies our markets with merchandise. How often we find butter, wool, maple sugar, etc., taken to market in such poor shape that it does not bring as much, within 20 per cent., as goods of no better quality are selling for, where the producer understands that the placing of his product upon the markets in attractive shape, has much to do with the value thereof. It is said that Mr. Durand, an extensive strawberry propagator in New Jersey, always finds a ready sale for his choice strawberries at a very high figure, while those of shiftless producers spoil on the markets without a purchaser. Thus, Mr. Durand obtains more money from his few rows of choice fruit put upon the market in attractive shape, than is obtained from as many acres grown in a slip-shod manner, and sent to market by shiftless parties. Honey is no exception to this rule, unless it is that the difference is still greater than on most other productions.

Hence, to place our honey upon the market in the best possible shape should be the aim of every bee-keeper in the land. My aim has always been, not only to get the honey off the hives before it was soiled by the bees, as I stated in the production part of these articles, but also to keep the combs as nice and perfect till they were placed upon the market, as they were when first taken from the hive. This is no easy task, for from the first, honey is liable to accidents which, if they occur, soon reduces the price from $\frac{1}{3}$ to $\frac{1}{2}$.

I once hired a man to help me remove honey from the hive, as I was nearly sick and unable to keep even with my work as I desired to, but after his working with me half a day I so improved in health that his assistance was no longer necessary. He would manage to get his fingers against the honey so as to break the nice cappings to nearly every box, in spite of all I could do, and if he did not do that he would get the corner of one box into the face side of the comb in some of the other boxes, and I actually believe I paid him 75 cents for doing me $10 damage. Where a person is naturally sensitive, such proceedings will cure slight sickness quicker than a physician can. I only give this illustration to impress on the minds of the readers that the utmost care is necessary at all times in handling section boxes of honey.

The first requisite in caring for our honey after it is taken from the hives is a good room in which to store it. Years ago it used to be the custom to store honey in the cellar to keep it cool, but I believe all of our practical bee-keepers of to-day prefer a warm room to a cool one, on account of the honey sweating, or taking on dampness in a cool room, thus giving it a watery appearance. If left for a great length of time in such a place the honey will often become so damp and thin as to burst the sealing, and leak badly as well as to sour. While in New York, in 1877, I saw in a damp cellar several hundred pounds that had become thus damp and thin. It had run down the sides of the crates and over the floor, where it had soured, making it smell badly and look equally bad. To avoid an occurrance like this our honey should be stored in a dry, warm room, and be so piled up that the air can circulate freely all around it.

In visiting some of our extensive comb honey producers here in the east, I found them carrying their honey up a flight of stairs to the chamber of the house or workshop, that they might get the heat produced by the sun shining on the roof. Now, while this gave all that was necessary in the shape of a honey room, it also gave a large amount of extra work which I consider as unnecessary.

I use a room 7x10 feet, in the southwest corner of my shop, having the outside painted a dark color, so that the rays of the afternoon sun will make the room as warm as possible. As a body of honey, once thoroughly warmed, will hold the heat for a long time, the average temperature of this room will be pretty high, ranging from 80° to 100° most of the time, thus ripening the honey so that in a month's time it can be handled as you please and not a drop of honey will leak, even from the few uncapped cells the bees always leave around the edge of the box.

To secure a free circulation of air, as honey will take on dampness even in a warm room if the air is partially excluded from it, I build a platform of scantling a foot from the floor, and six inches out from the wall, upon which I pile the filled sections, keeping them in the same position they occupied while standing on the hive. On warm days raise the windows on each side of the room, so as to admit all the fresh, dry air possible, and as it comes toward evening close them again. To prevent robbers coming in, and also to let the few bees that may come in on the honey out, I cover the window (tacking it to the casing outside) with wire-cloth, letting it go above the casing nearly a foot at the top, and keeping it out from the building $\frac{1}{2}$ inch by means of strips of that thickness tacked to the outside of the shop, and running up and down the side. Thus, all bees from the inside crawl to the top above the window where they find an outlet, while the robbers are intent on getting through the wire-cloth where they can see and smell the honey, as their instinct is not equal to showing them that by going above the window a foot, and down behind the wire-cloth they could get the tempting sweet. So they are kept outside where you wish them by this simple device, while the climbing instinct of those inside enables them to get out, thus keeping your room clear of bees.

My next will be how to detect the work of the moth-worm when it first hatches, and how to head them off if troublesome.

Borodino, N. Y.

For the American Bee Journal.

Reply to Mr. Clarke.

JAMES HEDDON.

I wish to assure Mr. Clarke that I have no ill feeling toward him or any other bee-keeper; that I admire his terse and scholarly writings. In our views on practical apiculture we differ; that is best, perhaps. Of Mr. Clarke's practical knowledge of apiculture, I have never been able to learn much. I presume I was wrong in my use of the more belligerent term "attack," when I meant simply "criticism." I stand thankfully corrected. I ask to be excused for this literary mistake, having had far less chance to become proficient in this direction than the Rev. Mr. Clarke or Prof. Cook, having made honey producing a specialty since my youth, and have had to stick very closely thereto, to support my family and "get on in the world."

Mr. Clarke, do you not frequently read facts in the BEE JOURNAL, where experiments have been made especially to test the pollen theory, which indicate that pollen is one of, if not the chief trouble. I have many private letters upon the subject, all favoring that theory. Among them I call to mind Dr. A. B. Mason's, of Wagon Works, O., and Walter Harmes', of Manistee, Mich. There are many more, but I depend upon memory only. Referring to my religious views, and that, too, where it has no bearing upon the subject under consideration, I think myself is "questionable" in its "propriety." I mentioned it as I did to illustrate the point that Mr. D. and many others believed things implicitly, where there were no living "witnesses that he could cross-examine." I thank you, Mr. Clarke, for wishing that I believed a something, the same as you do, and I trust that you do not hold to the ancient custom of convincing me by a little screw applied to my thumbs.

But, really, has not the time gone by when you can satisfactorily answer a man's argument by pointing at what you think to be a hole in his coat? Perhaps I think more of science, and less of the supernatural than you do, because of our labors with and incomes derived from these sources. Whether "Thomas" doubted or not, honesty was always the best policy, and always will be. The way "we" agree so nicely in our opinions in regard to apiculture here, is because "we," the family and 3 apprentices, are numerous enough to hold daily Bee Conventions, and when we differ, we just discuss the subject till we agree, if possible, and upon points that we do not agree, I do not say "we" think so. Now, you have not said any unkind things of me. that I know of. I do not consider sarcasm unkindness, any more than it is logic. I rather like "smart" hits, and would rather they would hit me than to never be shot. I smoke the pipe of peace with you, and if you will drop in upon me some time, I will convince you that my stomach is not sour—no not acid—not even bacterious.

Dowagiac, Mich.

For the American Bee Journal.

Wintering Bees in Clamps.

W. Z. HUTCHINSON.

About a year ago an article appeared in the BEE JOURNAL upon the above subject, by Mr. C. J. Robinson. I was very much interested in the matter, and, after some correspondence with Mr. R., I decided to give this method of wintering a trial.

Learning that dampness was one great foe to success, I selected a dry, sandy knoll as a site for my clamps. I use the word in the plural, because I buried bees in two pits, in order that I might open one early and the other late, and note the difference in the condition of the bees.

In burying the bees, I first dug a trench two feet wide at the top, and two feet deep. This trench was filled with dry straw, then pieces of scantling were laid across the trench, and the hives set over the trench upon these pieces of scantling. With rails and pieces of rails a pen was built around the hives, and the space between hives and rails, which was about one foot, was filled with dry straw. The pen was built about a foot higher than the tops of the hives, the tops of the hives were covered with straw to the depth of one foot, and then the straw was covered with rails, the ends of the rails resting upon the outside pen. The sides of the pen were built slightly sloping, so that the top of the pen was smaller than the bottom. The pen was covered upon the outside with about a foot of straw, and then the whole was covered with earth to the depth of about 18 inches.

On Nov. 15, four colonies were buried in one clamp, and six in another. No openings were left for ventilation, and, during the past winter. I was obliged to "tell about those bees" until it really became tiresome. "What! don't you give them any air?" "No, only what was in there when they were buried, and what little finds its way through the earth." "Why! they'll smother won't they?" "No, I think not." "Well, I wouldn't give you much for them," etc.

I selected the lightest colonies, as Mr. Robinson said that he thought that they wintered better in clamps than did strong colonies. The lightest colony did not cover three combs, while the heaviest covered six combs.

One clamp was opened April 1st, and the bees were found in fine condition. There were but few dead bees, scarcely any honey consumed, the bees very quiet with no signs of dysentery, no moldy combs, and the straw so dry and sweet that the cow ate it readily. The other clamp was opened April 17th, and the bees found in the same condition as in the other clamp, except that the lightest colony was dead, for which I can give no reason, unless it was because there were so few bees. With the exception of this one colony, the bees appeared to be in about the same condition as when placed in the clamps—as though they had slept only over night, instead of over five months, as some of them had.

This experiment helps to confirm my belief that, if properly managed, bees can be successfully wintered without carrying them out, in the winter, for a "fly."

I have been so successful in this attempt at wintering bees in clamps, that I shall try it again next winter upon a larger scale. If I remember rightly, Mr. Robinson has, for several years, wintered his light colonies in this manner, and wintered them successfully, too. I wish to thank Mr. Robinson and the BEE JOURNAL for information upon this subject.

Rogersville, Mich.

For the American Bee Journal.

Fastening Foundation in Sections.

L. JAMES.

On page 227 of the current volume of the BEE JOURNAL is an article by Dr. Miller upon the above subject, and its perusal as well as many others that have appeared at various times in the JOURNAL, leads me to believe that it is not known generally among the fraternity how easy a thing it is to fasten either foundation or combs in frames or boxes, that will remain just where you put them. And if the Doctor or Mr. Doolittle will give it a fair trial, I think the former will have no further "trouble in having it dropping out of sections just at the most annoying time when honey is coming in with a rush," and that the latter will lay aside his hot iron.

In practice it is simple, and the foundation can be inserted rapidly and securely. I will give to the fraternity my method of fastening starters of combs in surplus boxes, or whole sheets of bee combs in frames for the body of the hive for the past 15 or 20 years, with entire satisfaction, and I find it answers equally well in securing foundation in place. To hold the foundation in the frame (or section if that name is more expressive) conveniently for fastening it there, I make what I shall call a support, as follows: Take a piece of 3-16 inch board (a piece of cigar box I prefer) and cut it ¼ inch less on all sides than the inside of the section. On one side of this piece and flush with the edge nail a strip ¾ or ½ inch thick, and the same in length, and wide enough to project ¼ inch beyond the side of the top-bar of the frame, when the opposite side of the support is a trifle less than half way through the section (less the thickness of the foundation). To the lower outside edge of this ¾ inch strip nail a piece ⅛ inch thick, ¼ inch wide and of the same length to gauge the exact distance the support will stand in the section so as to hold the foundation centrally in the section. Cut the top and one side of the foundation at right angles to each other so that it will come in close contact with the top-bar and one side of the section. Turn the section upside down and clap the support inside with the thumb placed on the ¾ inch strip and the fingers on the outside of the top-bar holding it securely in place, lay in the foundation carefully so as to have the straight edges fit nicely to the top-bar and side. This will prevent the melted cement from running under it. Tip the section a little to one side to prevent the foundation from falling out. To fasten it hold the frame in such a position as to have one of the straight edges at a suitable angle for the melted cement to run quickly down its edge to the corner of the section, if there is a surplus of it, by adroitly turning the section allow it to traverse on down the other straight edge of the foundation. It is not advisable to pour on too much at first, but after it has started down to keep dropping it from the spoon upon the descending current as it shows signs of stopping. Some practice and care is needed to keep the cement at a proper temperature; if too hot it will melt the foundation, and if too cool it will not flow fast enough to make a neat job. It requires but little cement to hold the foundation firmly in its place, and all beyond this is worse than useless. A little practice will enable the operator to hold the frame in a proper position to have the cement travel quickly along in its course so as not to have it spread too much on either the foundation or frame. If, however, too much has been used, or dropped on the frame, I find a table knife with the blade broken off so as to leave it an inch long on the back and half an inch longer on the cutting edge, giving it an acute angle (most conveniently done by grinding), a convenient tool to remove the superfluous cement. With the thumb placed on one side of the blade to act as a guage it can quickly be removed if attended to before it becomes too cool.

The cement I use is made by melting together in my wax cup three parts of clean bees wax and one of clear, clean rosin, well incorporated by stirring after they are melted. The quantities are by bulk, and as near their proportions as I can guess, as it is added from time to time as I need it.

The best thing I have found for applying the cement with is a thin teaspoon with the point of the bowl drawn out to a narrow pitcher mouth shape, by hammering; I also find the feather end of a goose quill, that is a little dished or spoon shaped, properly trimmed, quite useful on many occasions to touch up and finish any little imperfection that may have occurred in inserting the foundation, or in closing openings between the glass and box where the former happens to be too small to make a good fit.

While upon this subject I will give a description of my wax cup that may be of advantage to beginners—the old ones know all about it. It is a tin cup 5 inches in diameter, 2½ inches deep, with a small lip soldered on one side, for the convenience of pouring the cement when wishing to clean out the cup. A strip of tin 1½ inches wide crosses the cup and is riveted at either end to the sides of the cup, so as to stand ¾ of an inch above the top of the cup, with a circular piece cut out of the upper edge to correspond in a measure with the convexity of the bottom of the spoon, to readily clean off the drop of cement from the bottom of it as it is drawn through this depression, and conveyed back into the cup.

Atlanta, Ill., May 3, 1882.

Texas Agricultural Journal.

Bee Forage of Southern Texas.

THOS. D. LEONARD.

Honey is strictly a production of the vegetable kingdom, and in most cases is confined to flowers. All flowers do not produce honey. Some produce pollen (bee bread) only, while others produce both pollen and honey. Honey is secreted by minute glands, contained in small cups called nectaries at the base of the stamens, and also exudes from the leaves and stems of many plants. It consequently partakes more or less of the flavor of the flower that produces it. The God who created both bees and flowers made both in harmony with each other.

The sweet nectar is supplied by the flowers in a crude state, and consequently needs to be analyzed and refined. The bee is guided by its God-given instinct to select what she chooses and reject any and all impurities not consistent with her choice. Physically she is prepared for this work, and also possesses an extraordinary instinct, to guide her where and when and how to find honey or pollen when it exists even in the smallest quantities, and at its earliest appearance.

We have about fifteen varieties of trees that may be classed good and best honey producers, to wit: The peach is earliest to bloom; there are several varieties of haw which begin to bloom early in March and continue to April—it is valuable for brood-raising; red-bud is early and very good; hackberry, holly and prickly ash are good; wild peach may be classed first-best and blooms in April, and sweet bay may be classed with it but blooms later; youpon and huckleberry are very good and begin last of April and continue 3 or 4 weeks; dew berry is valuable and blooms early; grape and ratan are the best vines, yet all the vines we have are good—nothing we have excels ratan and linden. The spring harvest closes with the linden. When it blooms, from the 15th of May to the 20th of June, we have our best flow of honey, so have your colonies in good condition for harvesting. The wild mulberry comes in bloom in June and lasts several weeks. The horsemint comes in bloom in May and continues four or five weeks. Golden-rod and boneset bloom in September and October—both are very good for winter honey. Corn and cotton afford some honey; melons afford honey; the white-flowered thistle is very good and lasts several weeks. There are several other trees and plants that produce honey. If you have bees, and will give attention, you will soon learn all they work on in your locality.

All the above named trees, vines and plants do not exist in any one locality; consequently, as they bloom at different periods, and none last more than 2 or 4 weeks, there may be gaps of 10 or 20 days in many localities, which would be detrimental to the bees. A 4 or 6 weeks drought at any time would seriously affect the honey crop. Too much rain is also disastrous. Any locality can be improved by selecting and planting such plants as will fill up the gaps that may exist. Such should be selected as might be planted on waste lands, old fields, road sides, banks of streams, hedge-rows, etc. I do not think it will pay to plant anything that requires cultivation for honey alone. All the hedges that I have seen afford honey-producing flowers. Wild peach will pay planted for groves or shade. So will linden.

We have honey-dew some years in some localities. It is the product of an insect. It is not fine flavored but answers for brood-raising and winter honey. I have seen the insect in millions, and the honey dripping from the leaves of the trees.

Howth Station, Texas.

Home Science Gossip.

Shading for Bee Hives.

F. L. WRIGHT.

While all agree as to the propriety of shading hives from the hot sun of midsummer, all do not agree as to the method of shading. Without doubt the best shade for hives never has been thought of. Each has his pet method, such as grape vines, raspberries, hops, tomatoes trained on a trellis, evergreen trees closely sheared on one side, etc. By far the greater part prefer the first mentioned, viz: grape vines. This being our preference we will try to give you a short chapter on planting and caring for vines, and in our next will return to our subject.

A vine should be planted on the south side of every stand. Select some good salable variety, and one known to do well in your locality. For South I would recommend Martha, Ives, Concord and some of the best *Æstivatis* class such as Herbemont, etc. For the West only such hardy sorts as Janesville, Clinton and Taylor of the *Ripirari* class, and the hardiest of the *Labruscas*. For the States east of Lake Michigan all of the best varieties of *Lab* and the hardiest hybrids will be found more satisfactory than the extra hardy varieties required for the West and Northwest.

Select good, strong one-year old vines, which can be had at a very low price,—cut back the tops to two or three buds, and the roots one-third. Dig a hole large enough to take in all the roots without having any two cross each other, and 18 inches or two feet deep. Fill up the hole to within 6 or 8 inches of the top with surface soil in which has been mixed some bones, wood ashes, charcoal, etc.; on this plant the vine, spreading out all the roots, and then fill up with fine surface soil packing closely and firmly.

As soon as the shoots have grown a few inches rub off all but the strongest one. A good stake should be driven firmly by the side of the vine and the vine should from time to time be tied to this, which will be all the support needed for the first two years. As soon as the young shoot has reached the top of the stake (which should be 4 feet high), the end should be pinched off which will cause it to throw out laterals, thus making all the more shade. At the end of the first season if the vine has made a good growth, you should cut it back to within 2 feet of the ground, and the next season allow but two of the strongest shoots to grow. These should be trained to the stake as before, only allow them to grow beyond its top and hang partially over the hive. At the end of the second season cut back to about the top of the stake. After this you will need a trellis of some kind. The one we give preference is known as the Cayrood overhead vine trellis. It is constructed as follows: Set a good, sound oak or cedar post by the side of every vine, letting it extend out of the ground 6½ feet. On the top of this spike 2x2 scantling 3 feet long, making a cross. On the top of this stretch 4 wires (No. 14) from one end to the other of the row of vines fastening them securely 12 inches apart on the scantling, thus making an arbor that, when covered with vines, will give good shade in the middle of the day, when most needed. The vines are also over head entirely out of the way, as the vines are simply taken up the post and allowed to extend along the wires, and if any grow off and hang down, simply throw them up over the wires. A very fair shade can be made with raspberries by simply allowing but 3 or 4 canes to grow, and, as soon as they reach the height of 4 feet, pinch off the ends which will cause them to throw out branches or laterals. These also should be pinched as soon as they grow a foot or so. If treated in this way they make a stocky growth and yield large quantities of extra fine fruit.

There are many other things used for shade with good results, but let me caution you not to place them under large trees where they cannot receive the direct rays of the morning and evening sun. Hives in such localities are in damp times subject to fungoid growth, soon rot and combs often mold.

Plainfield, Mich.

Scientific News.

The Functions of the Queen Bee.

PROF. C. F. KROEH.

Some of the most surprising facts concerning the queen bee still remain to be mentioned. As there are three kinds of bees in the hive, we should naturally look for three kinds of eggs for them to hatch from; but the queen lays only two kinds. There can be no doubt as to the identity of the eggs from which queens and workers spring. We have waited until worker eggs hatched into tiny grubs, and then transferred these into cells which a queenless colony had enlarged to rear queens. Others have tried the same experiment, and the result uniformly has been that these larvæ hatched out into queens.

It still remains for us, however, to account for the manner in which the queen lays two kinds of eggs after her fertilization. That a healthy queen knows what kind of an egg she is about to lay, and that she has the power of regulating its sex, is evident from the fact that she puts the egg in a cell of the proper dimensions, laying worker eggs in cells one-fifth of an inch, and drone eggs in cells one-fourth of an inch in diameter, without making any mistakes. The microscope has partly solved the mystery. The ovary of the queen consists of two lobes emptying into a common duct, just below the entrance of which there is a small vesicle, called the spermatheca, which Hunter, in 1792, proved to be filled with the seminal fluid of the drone when copulation takes place, and Leukardt estimates that this fluid contains about twenty-five millions of spermatozoa. Now, when the queen lays an egg, she may or may not compress the spermatheca at the moment the egg passes it; if she does, two or three spermatozoa find their way into it, and the result is a worker egg; if she does not, the egg remains unimpregnated and hatches out a drone. Siebold found from one to three spermatozoa in every worker egg, but none at all in drone eggs: and Donhoff reared a worker from a drone egg which he had artificially impregnated as soon as it was laid.

It was stated above that the microscope solved the mystery but partially; for it is contrary to our common experience that unimpregnated eggs should hatch at all. If hens, for example, are kept by themselves, they will continue to lay eggs; but these eggs will never hatch. Nevertheless, the evidence in the case of the queen bee does not admit of a reasonable doubt. In 1845, Dzierzon found the true interpretation of the observation so frequently made, that some queens lay nothing but drone eggs. If a queen hatches out crippled, so as to be unable to fly, she will never be fertilized. If she is prevented by bad weather or other causes from flying out to meet a drone for a period of about three weeks after hatching, she is no longer capable of fertilization, probably by reason of a change in her organs of generation. In either case she will lay eggs that will hatch drones only. As queens grow older, their supply of spermatozoa, copious as it is, gradually dwindles down, and they will lay more and more drone eggs in proportion to the number of worker eggs. Indeed, the supply is liable at any time to become exhausted, and the brood will then consist solely of drones. Queens of the three kinds mentioned have been repeatedly dissected under the microscope, and in every case the spermatheca was found to be devoid of spermatozoa. As it is manifestly to the disadvantage of the bee-keeper to raise a large number of drones, which are consumers only and not producers, he remorselessly dispatches all drone-laying queens and replaces them by young fertile ones. As a rule it does not pay to keep a queen longer than three years.

So far as we know, a single fertilization lasts a queen for life. Instances have been reported now and then that a queen had left her hive for a second mating, but owing to the extreme difficulty of verifying observations of this kind, they cannot be accepted as facts until further evidence accumulates.

A healthy queen not only knows in advance the sex of the eggs she is going to lay, but she proportions their number to the wants of the colony. If the weather is cool, or the colony so weak that it cannot produce heat enough to hatch much brood, or if there is scarcity of honey, she will lay but few eggs. She deposits them, moreover, in contiguous cells, and after having laid a patch on one side of the comb, she crosses over on the other side and lays in the cells exactly opposite, so as to economize the heat of the cluster. In the height of the season, when an abundance of honey is brought into the hive, the development of eggs in her ovary is proportionally great. Then it often happens that she is pressed for room, all the cells being occupied by stores or brood. As she is obliged to lay the eggs as fast as they come to maturity, she sometimes lays two in one cell, one of them being then removed by the workers; or else she simply drops them. Langstroth states that the workers in that case often make a meal of them, and admires the self-control they must exercise upon other occasions in abstaining from dining upon eggs when they are not plenty.

The queen eats honey herself, but she is also fed by the workers, probably with partly digested honey and pollen. It is quite likely that the amount of the food thus offered her regulates the maturing of eggs in her ovary. When the workers collect an abundance of stores, they feed her liberally, and she then lays a large number of eggs; but when stores are scant they do not stimulate her so much. Before dismissing this portion of the subject, it may be well to caution the reader not to allow his imagination to be captivated by the word queen to such an extent as to assign to her mentally the prerogatives of royalty. Some writers go so far as to picture her constantly surrounded by a respectful circle of subjects, waiting upon her majesty, and ready to carry her commands to every part of the colony. It appears, on the contrary, that the regulation of the affairs of the hive belongs not to her, but to the workers. They decide when to swarm, how much comb to build, and how much brood to rear. They determine when to raise new queens, probably transferring eggs into queen cells, and they protect them from the jealousy of the old queen. It seems as though the sole function of the queen is to lay eggs.

Stevens' Institute of Technology.

CLUBBING LIST.

We supply the Weekly **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal	$2 00..	
and Gleanings in Bee-Culture (A. I. Root)	3 00..	2 75
Bee-Keepers' Magazine (A. J. King)	3 00..	2 60
Bee-Keepers' Instructor (W. Thomas)	2 50..	2 35
The 4 above-named papers	4 50..	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A. G. Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 7 above-named papers	6 30..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

* * *

Premiums.—Those who get up clubs for the Weekly Bee Journal for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

* * *

☞ "Pot-Bouille," Emile Zola's new book, is creating a greater sensation in Paris than either "Nana," or "L'Assommoir," 30,000 copies of it having been sold in Paris on the first day of its publication, and the American edition is published this day by T. B. Peterson & Brothers, Philadelphia, in a large square duodecimo volume, uniform with "Nana" and "L'Assommoir," and is for sale by all Booksellers, and at all News Stands, and on all Railroad Trains. "Pot-Bouille" is intensely interesting, and is a faithful picture of the manners and morals of the Parisian middle classes.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

May 11—Champlain Valley, at Middlebury, Vt.
T. Brookins, Sec., East Shoreham, Vt.

16—N. W. Ill. and S. W. Wis., at Rock City, Ill.
Jonathan Stewart, Sec., Rock City, Ill.

25—Iowa Central, at Winterset. Iowa.
Henry Wallace, Sec.

June 3—Hart County, Ky., at Woodsonville, Ky.

Oct. 5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

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Salt Lake Herald.

Utah Bee-Keepers' Convention.

The Territorial Bee-Keepers' Association assembled at Salt Lake City, April 6, 1882, President A. M. Musser presiding.

Letters were read from various parts of the Territory. Mrs. Annie C. Woodberry, of St. George, writes that in the spring of 1881 she had 45 colonies, increased to 51, lost 5 during the summer, leaving 46 in good condition; had taken 2,200 lbs. of honey, mostly from top boxes.

Mr. John Price, of Washington, writes March 26, 1882: Six years ago I began bee-keeping with one colony, and now I have 88 colonies of bees in good condition; have lost 6 by bee moths; no foul brood in this place. There are 175 colonies of bees in Washington; no trouble wintering on summer stands, with shed roofs to shield them from our hot Dixie sun. We average 75 lbs. of honey to each colony, but I have taken 162½ lbs. from one.

Mr. Silas Richards, of Union, writes March 27, that they have 11 bee-keepers there, had 67 colonies, but have lost 12, leaving a balance of 55 this spring; winter on summer stands; generally practice natural swarming; do not use extractor, neither disturb the brood nest; use scarcely any bee veils or gloves.

Mr. Joseph E. Johnson, writes from St. George, March 31, 1882, that there are about 500 colonies in Washington, Kane and Iron Counties, yielding from 20 to 100 lbs. to the colony, honey varying from 15 to 25 cents per pound. The supply is equal to the demand. Not a single case of foul brood has been known in these parts. The best honey season there is during May and June. If there are late rains they have some fall bloom, and, as the winters are warm, bees fly nearly every day. Consequently, there is liability to about 25 per cent. loss by starvation, unless the bees are fed when the supplies are short.

President James Cullimore writes from Pleasant Grove, Utah County, that press of business prevents him from giving a full report of the Association. He has 115 colonies, and has lost only one up to this time, wintered on summer stands. After so long a winter honey is scarce in the hives. Some in the neighborhood have lost but few, and others, none of their bees.

Mr. T. W. Lee says in Tooele City there are 16 bee-keepers, and 106 colonies of bees. They were put into winter quarters on summer stands. Losses 24, leaving 82 colonies in tolerably good condition. No foul brood. Bees are mostly hybrids.

Mr. Charles Connely says, as bee inspector, he had destroyed 21 colonies of foul brood in Box Elder County in one season; and on his return home expects to destroy others infected, and try to rid the county of this dreadful pest. He started with 2 colonies and now has 46. There are about 350 in the county. He wintered his bees on summer stands about 4 inches apart, filled with hay, chaff or straw. Gives upper ventilation, puts a cloth over the lower hive, keeps them dry and warm, and has no trouble in wintering. Honey sells there at 20 cents per pound.

Bee Inspector R. M. Birch, of Weber County, said he winters bees on summer stands in shed; puts cloth on lower hive and fills the upper box with hay. They winter well.

Bishop C. A. Madsen, of Gunnison, Sanpete County, said their bees, although but few in number, had wintered well, and as he learned more about bees his interest increased. Intended to progress in bee-culture in Gunnison.

Mr. N. T. Porter, of Davis County, said they had been sorely troubled with foul brood, and consequently heavy loss. He had lost his bees, but was starting again with better success. He had placed chopped feed near his hives and the bees worked wonderfully in it.

Vice President Samuel Mackey took pride in bee-keeping, and always had good success in wintering his bees, until this very hard winter when he had lost 56 out of 87 colonies. He thought the severe frosts had cracked some of the honey combs, and the damp of the hives had soured the honey, sickening and killing many of the bees; also, many of the bees had been lost in flight on warm days, thus weakening the colonies. Foul brood was imported into our country, and has spread fearfully in many places. It must be destroyed if we would be successful with bees. Most of his losses occurred in February. Thinks the loss in Salt Lake County will be over 50 per cent.

Mr. Wm. Egan said his experience had been quite different this winter from that of any previous year. He had only 5 colonies of bees left alive out of 40. For want of time he had neglected to pack his chaff hives last fall, hence his loss. Previously, when he had protected his bees, he lost scarcely any.

Edward Stevenson said we must provide better winter quarters for our bees in order to insure success, especially as our winters are so changeable in this high altitude. He had placed some of his bees under shed roofs packed with chaff, with a movable front ten feet long and two feet wide, leaving four inches back and front, boxing the entrance, leaving a passage for the bees through the movable front. The hot rays of the sun will not so easily cause the bees to fly, until the air is sufficiently warm for them to return home again. This makes a cheap chaff hive, as six hives can be placed together in one packing, and be kept warm until late spring, thus inducing early brooding. They must have proper ventilation and chaff cushions in upper box. In Dixie scarcely any bees die because of the cold.

The meeting was well attended, and an increased desire to make Utah a success in bee-culture was manifested, that the land may flow with honey as it now does with milk.

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Read before the Mahoning Valley Convention.

Pasturage or Forage for Bees.

LEONIDAS CARSON.

To every owner of an apiary, the most important question for consideration is a continuation of good pasturage or forage for bees, for on this rests all our profits. If we have not a succession of indigenous forage, we should plant to fill the vacancy. By indigenous, I mean those honey-producing plants and trees that are native, or produced natural in a country or climate.

If you have not the golden willow, procure it and plant, for it yields both pollen and honey in profusion, of a fine quality. For shade and timber plant the maple, which yields both pollen and honey. Next in season we have ground ivy, or Gill over the ground. Then the dandelion rears its golden head to gladden our little pets.

The occupation of horticulture and bee-keeping go hand-in-hand. The first fruit tree to bloom is the peach, then the pear, apple and cherry follow each other in rapid succession, yielding pollen and honey in rich profusion. Near or about this time the strawberry begins to bloom. The wild cherry commences to bloom and fills the gap between fruit bloom and white clover. Next we come to our main or most general forage plant, which, if not found in natural profusion, may be grown in all localities, viz: Dutch or white clover. This rarely fails to yield honey of the finest quality. Those bee-keepers who have low wet fields with a damp, heavy soil, should sow Alsike or Swedish clover, it being a greater honey-producer than white clover, and is second to no clover grown for hay, and if not pastured too short, will never run out. At or about this time we find the raspberry in bloom, yielding plenty of fine honey of a quality surpassed by none. I have never known a season when it failed to secrete honey. Therefore, to the lovers of this fine fruit I say, plant the raspberry. Next comes linden or basswood. Standing, as it does, first in rank as a honey-producing tree of rapid growth and luxuriant foliage, it is truly a beautiful tree for shade. To every bee-keeper I would say, plant many linden trees. It will pay to plant the tulip tree, known in this locality as poplar or white-wood. The tulip tree is a good honey-producer, the flowers expand in succession, thus affording more time to the bees in which to gather the rich harvest. The tulip tree blooms when 10 years old. Those who own rough, broken or waste land, should try sweet or melilot clover. Sow it in fence corners and along the roads. This plant yields a delicious honey. Do not forget to sow cleome or Rocky Mountain bee plant. It yields rich honey in profusion. In the driest seasons it has never failed to secrete honey. The bees visit it from dawn till dark. It will pay to plant the figwort, often known as the Simpson honey plant. The pretty little ball-shaped flowers, with a lip somewhat like the pitcher plant, is usually found filled with honey.

Sow buckwheat of the silver-hull variety from the 26th of June to the 4th or 5th of July. This cereal upon fair soil will yield all the way from 10 to 25 bushels of seed per acre, and if the season is favorable, a bountiful supply of honey.

If you have no golden rod in your locality, get a few roots and plant them, especially if you live close to some stream where waste land is plenty. This, in some localities, furnishes the bulk of the great yield of fall honey. Last fall golden rod failed to secrete honey, on account of the dry weather. The aster is another fall-yielding honey plant. You may frequently find a half dozen varieties growing side by side.

There are many other plants and trees yielding honey, for instance, the box elder and catalpa. The last named would pay farmers to grow for timber, it being very lasting, and in its season is covered with honey yielding blossoms.

It will pay to plant the common locust both for timber and honey, and the honey locust for hedges and for the honey it produces. Plant catnip for honey.

I have only attempted to give a list of some of the most important honey-producing plants and trees. The most of which have a double value. Again I say, plant for a continual honey harvest.

Tuscarawas Valley, O., Convention.

The Tuscarawas Valley, O., Bee-Keepers' Association met at Coshocton, O., April 19, and was called to order by the President, who delivered his annual address.

No minutes were at hand, and a discussion ensued as to the propriety of striking out Guernsey and Muskingum Counties, these Counties having failed to be represented in the Convention. The motion was carried and the body will hereafter be known as the Tuscarawas Valley Bee-Keepers' Association, composed of Tuscarawas and Coshocton counties.

Moved and carried that all persons who are connected with this Convention and live in Muskingum and Guernsey Counties, can, if they wish, withdraw from the Convention and have their fees returned to them.

Election of officers: L. B. Wolfe, of Coshocton, was re-elected for President; J. B. Wolfe for Vice President; Joseph Love for Treasurer, and J. A. Bucklew for Secretary.

The following subjects were discussed: Which is the best mode of obtaining surplus honey, side or top storing? No conclusion.

Knowing that the bees will store more honey without the use of division boards, how can we prevent the queen from entering the surplus department? No conclusion.

What is best, natural or artificial swarming?

It is the opinion of this Convention, after hearing the experience of the members present and their modes of swarming, that artificial swarming is the best, "all things considered," if it is done intelligently.

Adjourned till 10 o'clock a. m. tomorrow.

The attendance in the morning being small, the morning was occupied in giving the experience of each other on different topics of interest to bee-keepers, and a friendly and profitable chat was indulged in till noon.

AFTERNOON SESSION.

Which is the best, the black or Italian bee, and why?

J. A. Bucklew said his experience with Italians is, they are more docile to handle than the blacks. Lift a frame of them out of the hive and the bees tenaciously cling to their comb, the moving not disturbing them from their labors, but it is not so with the blacks; the moment you raise the frame they become greatly agitated, quit work and run off the frame thoroughly demoralized. An Italian queen is not the least disturbed by the removal of the frame, but continues to perform her duties. When a black queen is sought, she is not to be found, and seeks concealment in some nook or corner. The Italians are greater workers than the blacks, working later and earlier, going farther in search of honey, and guarding themselves better against robbers and the ravages of the bee moth.

How to make apiculture a success?

Mr. L. B. Wolfe said to be successful, the keeper must be interested in his business, must study it, read and be informed as to how and when to do the needed work. Have the best bees, and movable frame hives.

Best mode to increase your colonies, and how to defeat the moth worm?

Divide colonies instead of allowing natural swarming.

Mr. Wolfe said, never allow the bees any more frames than they can cover, and contract their hives with division boards to suit the number of frames left with them. Be sure that the colony has a healthy, prolific queen, then the bees will take care of the moth worm.

Best mode of obtaining surplus honey to realize the greatest profits?

Estimates made by J. A. Bucklew, T. Wolfe and others on the product of one hive as a test, was as follows: Number of pounds of comb honey, 100; value, $20; expense, $2.45. Number of pounds of extracted honey, 500; value, $50; expense, $26.75.

Is it advisable to plant for bee pasture?

Opinions prevailed that it was highly necessary to plant something to bridge over the time between apple bloom and white clover, and between basswood bloom and fall flowers.

The next meeting of the Association will be held at Newcomerstown, on Friday, Oct. 6, 1882.

L. B. Wolfe, *Pres.*
J. A. Bucklew, *Sec.*

SELECTIONS FROM OUR LETTER BOX

Drone Trap.—Since my inquiry regarding a drone trap, I have invented one, to be placed at the entrance of the hive. The worker bees can get in and out of the trap, but the drones cannot get out of the hive without getting in the trap, and when in they cannot get out. I have just come in from my apiary, and found the trap half full of drones. By this trap I can catch all of the drones that I do not want my albino queens to mate with, or catch all but the albino drones. My bees are in good condition, wintered without the loss of any. Now for *Apis Americana*. No more worthless drones. L. A. Lowmaster.
Belle Vernon, O.

Promising.—The season continues very cold here; weak colonies are suffering, but those that have wintered well are very strong and promising.
J. Anderson.
Tiverton, Ont., May 6, 1882.

Bees Doing Well in Wisconsin.—Bees are doing well, with plenty of dandelions, and the fruit trees nearly in blossom. John Corscot.
Madison, Wis., May 9, 1882.

Wintered Well.—Bees wintered well—strong and weak alike survived. It is still freezing almost every night, although fruit trees are trying to put forth their bloom. C. H. Rue.
Manalapan, N. J., May 4, 1882.

Free Advertising.—I have a few words to say in reply to that correction in the Bee Journal for Feb. 15, page 98. I think it was hardly fair to attribute all my complaints to that one mistake. The two words "lose" and "have" might be written to look alike, and I thought that was a mistake, but the omission of words, parts of sentences, and the name of the manufacturer of the winter hive (which did not change ideas, but made my preference for those hives much less conspicuous), made it apparent to me that there was a reason for it not explained in the correction. If it is out of place to express one's preference for hives or anything else used in the apiary, giving the name of the inventor or manufacturer, then I will be more careful in the future in making out my reports.

MRS. A. M. SANDERS.
Sheridan, Mich., March 13, 1882.

[Inasmuch as it is admitted in the above letter that the words omitted "did not change the ideas," of course the only thing to complain of was the omission of advertising in the reading columns—a thing we aim to do at all times—but once in a while such advertising is so woven into the letter that it escapes our notice. So long as the hive was mentioned, for which the writer had preference, it was wholly unnecessary to give the name and address of the manufacturer; that would be simply an advertisement for which our columns are open at 20 cents per line, and against which our reading columns are *closed*, at any price. So there is nothing to complain of, and no excuse for writing to the manufacturers of the hive that we had made the omissions to injure it, etc. Had we inserted the free advertisement in our reading columns, our advertisers, who pay for such notices, would have had cause to complain. But now, no injustice has been done, and no one has any just grievance.—ED.]

Waters Receded.—The water has fallen 5 feet; ¼ of the lands overflown are planted; ¼ will be planted this week; ¼ will be planted before June, and the remaining ¼ will not be planted this year. Weather 60° to 80°, and cloudy; rain last night. Bees are doing but little this month; no swarming so far. We fertilize from a nucleus of drones, made with two frames of hatching drone brood and one frame of honey.

J. W. K. SHAW.
Loreauville, La., May 8, 1882.

Bees Doing Well.—I started with 50 colonies—have 120 now, all vigorous; have had no spring dwindling or any disease here. I have on a large lot of sections that are being filled rapidly. Those I offer for sale here are all nicely capped and white as snow, and are looked upon with great wonder. An old fogy said: "See what this country can do besides raising cotton, if we only had the sense to develop it." I have repressed swarming as much as possible, and shall always hereafter clip a wing of every queen, to prevent swarming as far as I can. I am hopeful of Southern bee-culture. Success to the BEE JOURNAL and Northern bee-keepers the present season.

OSCAR F. BLEDSOE.
Grenada, Miss., May 10, 1882.

Rubber for Bellows Smokers.—Seeing in the *Bee-Keepers' Exchange* an article giving experiments with rubber in the manufacture of smoker bellows, I thought you would be pleased to place before your readers further experiments with that article. To do this and to avoid the implication of interest in the matter (except for the benefit of bee-keepers), I mail to the BEE JOURNAL, this mail, two Bingham rubber bellows, which have been in steady use since May, 1880, for inspection. The thinner rubber has stood the test much the best, and has worked quick and easy all the time. The heavy rubber has cracked much the worse of the two, and worked slow and hard. They both began to crack the second season, and have grown worse all the time since. When I began the experiment, I saw that rubber had two good points for smoker material, viz: Careless bee-keepers would find that mice would not gnaw them, and that they would cost the manufacturer about two cents less apiece. To balance this, they would weigh more and perhaps have other fatal qualities. I was so well pleased with the thin rubber experiment the first season, that I contemplated putting rubber smokers on the market, and bought considerable material for that purpose, but lo! when cool spring management began, my much hoped-for rubber began to crack as you see, and no rubber smokers were offered for sale by me.

T. F. BINGHAM.
Abronia, Mich., May 8, 1882.

[The rubber bellows above referred to have come to hand, and both show evidence of much use. One only exhibits signs of cracking to any considerable extent, and even that is but little, if any, impaired for use. We do not believe, however, that they are at all superior to good leather, either in point of durability or effective work.—ED.]

Wintering Bees.—I commenced last season with 2 colonies of bees—one black, the other Italian; reared 40 Italian queens, and increased to 9 colonies; bought 4 colonies of blacks in August, and Italianized them. In September we united the nuclei and commenced to feed coffee A sugar, and just before winter set in we cut two ¾ inch holes through each comb about two inches below top-bar of each frame, and then they had large quantities of pollen stored, about one-half of the cells being partly filled with pollen and finished with honey, and we estimated that each colony had about 15 pounds of honey and sugar syrup, and the cold weather came on before they had capped all of it. This has been a very hard winter for bees in this section, the losses being larger than a year ago, averaging about 50 per cent. We enclosed each hive in a separate house, with 5 inches space between the house and hive on the sides, and 3 inches on the bottom, made high enough to contain the hive with the sections on, and covered with a good, tight roof. We next put new, clean burlaps on top of the frames, then had a frame 7 inches wide halved on the lower edge so that it will shut down over the top of the hive one-half of an inch with two pieces of burlaps between them; then we tacked a piece of clean burlaps on the bottom of this frame, leaving it slack enough so that the halving will go down over the hive, we then filled this with chaff and placed it on the hive; next we filled all the space between the hive and house with dry sawdust 3 inches above the bottom of the chaff box, put the roof on the house, and leave the entrance wide open all winter and see that it is kept clear, and let them remain on their summer stands, which is about 4 inches from the ground. By so doing we now rejoice with 13 colonies, all strong and healthy, and, strange to say, they had consumed nearly all of their large supply of pollen before they commenced to rear brood, with no injurious results. I think that a properly ventilated and protected hive is the most essential thing in safe wintering. Our houses cost about three dollars each, and they are ornamental as well as useful.

ISAAC HUTCHINS.
Wellington, Me., May 5, 1882.

Still Cold and Cheerless.—Our cold weather continues, and snow and frost is the order of the day here in what is called "cold Spofford," as that is the name of our town. The morning of the 2d of May found us with 2 inches of snow on the ground and a freezing wind from the northwest, while on the hills it was fair sleighing. The 30th of April (Sunday) was quite a warm day, and some pollen was brought in for the first, but the cold of the 2d killed the blossoms of the elms and soft maples which were opening. With the exception of April 30th, it has not been warm enough to open bee hives in a month. My best colonies have brood only in 3 frames, while the poorest have none at all. I am hoping for warm weather soon. If it does not come, the mild winter will have been of little benefit, for our bees might as well die from a cold winter as from a cold spring.

G. M. DOOLITTLE.
Borodino, N. Y., May 8, 1882.

Honey Harvest in Texas.—Bees are gathering honey rapidly from ratan. This harvest will connect with horsemint, and if seasonable, will give us a constant flow of 60 days.

WM. R. HOWARD.
Kingston, Texas, May 3, 1882.

Wintered Successfully Again.—Bees have again come through all in excellent condition. This is now 9 winters in succession without loss by my system of chaff packing, of which I am the originator. Wintering successfully is settled with me; but how to prevent swarming is the great problem with me, if I run for box honey.

H. H. FLICK.
Lavansville, Pa.

Unusually Early.—The interest in bee-keeping is increasing fast and greatly. I had a very fine Italian swarm come out to-day. This is unusually soon for us. Please answer: 1. I have a large number of sections partly filled with honey, and others with thick and thin dry comb; is it advisable to put them on the hives to be filled? My bees do not fill thick combs satisfactorily.

E. C. Jordan.

Stephenson's Depot, Va., May 5.

[Use the sections. Many make a point of having their section combs built out the previous season, for early use. Unless very bright and clear, first extract the honey from the partly filled sections. We have observed that bees rarely fill extra-thick combs as satisfactorily as the medium or thin ones. You can probably remedy this by shaving down the surface of the combs with a thin, very sharp knife.—Ed.]

Excessive Swarming.—I am having a lively time with my bees now; they are swarming very fast. I had 30 colonies to start with, and they have increased by natural swarming to 56, and not half of them have swarmed yet. I have had as many as 6 swarms from one hive. Two escaped to the woods, because I could not attend to them in time, being so many out at one time. They are storing honey pretty fast, and I am in hopes they will stop swarming. I have been a constant reader of the Bee Journal for several years and have noticed the views of some men as to pure Italians, hybrids, etc., and so far as I have experimented with bees, I find the cross of the Italians and blacks to be as good as any pure Italian for honey, and better for increase, though increase is not the thing for me now, for I cannot sell pure Italian bees, in a painted, movable frame hive, for $5. They do not know how to keep bees unless they can go to the swamp and cut a hollow black-gum, and cut it off with an axe, and set it by the meat house, and let it stand till June, then take a lot of rags and a hammer and go for some honey, bee-bread, young bees, etc. They say to me, how do you have such luck with your bees? I tell them there is no such thing as luck, it is in management. I do wish I could induce the people here to get to paying some attention to them. I have done all I can to get some of them to take the Bee Journal one year; but no, they say they are too poor. I am satisfied if I had time to give the proper attention to my bees, I could make more from them than any one man can in cotton. I want to ask a question or two to be answered in the next issue of the Bee Journal: 1. Will a non-fertilized queen's drones mate with a virgin queen the same as any drone? 2. Will a drone from a half-breed queen be pure, that is, will a pure Italian queen mated with a black drone, produce pure Italian drones; if not, how can the Dzierzon theory be true. Please answer the above as I am a seeker of knowledge in the bee line.

H. M. Williams.

Bowden, Ga., May 7, 1882.

[1. It is generally conceded they will.

2. The best authorities heretofore have been nearly unanimous in the opinion that if the queen herself is pure, the drones will also be pure. There are, however, some very intelligent dissenters from this view. Our observations and experiments on the two questions have not been satisfactory.—Ed.]

Sweet Clover.—My pets are doing well. I had queens and drones flying the first day of May. They are very busy on the maples, which are in full bloom. I have two colonies that they are trying to rob, and there is some hard fighting on both sides. 1. Please tell me what to do to prevent their fighting, as I have tried everything I know of. Enclosed you will find a specimen of a very good bee plant. It blooms from the middle of June till late in the fall, has a small white blossom, is very fragrant, and grows by the roadside. 2. What is it?

F. A. Gibson.

Racine, Wis., May 9, 1882.

[1. Close the entrance to the hive being robbed so but one bee can pass in or out at a time.

2. You have sent us a specimen of our favorite honey plant — sweet clover (*Melilotus alba*). All will recognize its value when they have become familiar with it.—Ed.]

A Prolific Queen.—As I gave in my report last fall, perhaps I had better tell you what I am doing now—busy hiving bees, 1 to 5 swarms per day. I put up my 33d swarm to-day. My first swarm came out on the 25th of March, and now has 10 frames of brood and is ready to swarm. I have a colony of bees in my apiary that are rather a curiosity. The queen is a fine Cyprian mated with a German-Italian drone, that is a hybrid drone. She was raised November, 1880, and mated on the 6th of December, and began laying a few eggs on the 10th of the same month; was wintered in a three-frame nucleus, built up rapidly last year, and gave a nice surplus and a few frames of brood. They went into winter quarters in 1881 on 8 frames, with space left for two more frames, which they filled with comb, and on the first of March the 10 combs were full of brood, and I gave them a full story with 10 frames of foundation. By the first of April these were full of brood, and I added a third story with 5 frames of comb and 5 of foundation, and 4 of these are to day full of brood, and eggs in three others—24 frames (standard Langstroth) almost solid brood. I extracted 12 lbs. of nice honey from the third story last week, and as long as the queen continues to lay as she has I will give her room; but I see our great honey plant, horsemint, is now beginning to bloom, and this army of bees will need more room soon. I never saw such demons; the smoke from a steam engine would hardly quiet the rascals; the moment the hive is opened at you they come. I prepare for them with gloves and veil, and work on as if they were my favorite Cyprians that behave so nicely. I have about 30 colonies of Cyprian bees in their purity, and a better bee never landed on the shores of America. I have had them in my apiary since August, 1880, and I know they are good. I started to tell you, I commenced operations this spring with 40 colonies; sold 32 colonies for $231.60, and I now have 45 colonies, which I think will go up to 50 by natural swarming. I am now harvesting my early wheat, and will soon have cake and honey raised in 1882.

B. F. Carroll.

Dresden, Tex., May 1, 1882.

Bees in Utah.—I am well pleased with the Bee Journal, and as an amateur in the bee business. I have received many valuable hints that would have been to my benefit last year. I had 3 colonies of bees last winter, but the winter has been the hardest we have had since this was a settlement, and many have lost heavily in bees. I lost all of mine; dysentery was the cause. This spring, seeing the advertisement in the Journal of Paul Dunken, of Freeman, Mo., I sent for 2 colonies of Italian bees, which I received in first rate condition on the 17th of April, and it was 2 days after before I could let them out, owing to the snow storm then raging in this place. Since that time the bees have done well. Now we have the peach, apple, apricot, plums, cottonwood, and May flowers all in bloom. Bees are streaming in with pollen and honey. I find in one hive a queen cell started, and plenty of young brood and drones hatched out, and by all appearance will have to divide in a few days. Some of the hives are rather weak, but in general the bees of this settlement are doing nicely, with plenty of bloom—clover and lucerne. We have in the past attended to the milk, but now we are beginning to attend to the honey, and it will soon be as the Prophet has said, a land flowing with "milk and honey."

John Dunn.

Tooele City, Utah, May 6, 1882.

Well for Philadelphia.—A rousing big swarm to-day. How is that for latitude 40°? This swarm issued on the 4th, but as they were clustering it threatened to rain, and they returned to the hive.

F. Hahman, Jr.

Philadelphia, Pa., May 8, 1882.

An Abundance of Bloom.—Bees are doing well in this locality so far this year. I had two fine colonies on the 5th inst. White clover is beginning to bloom and there is an abundance of it.

Elvin Armstrong.

Jerseyville, Ill., May 8, 1882.

Rearing Queens.—In your advice to Mr. A. L. Conger, Earlville, Iowa, in regard to rearing queens, you say: "Now take out the frames one at a time from the hive removed, and shake and brush all the bees from the combs in front of the new hive, then replace the combs in the black colony and release the queen." Now, I want to know what the black colony is going to do for bees. I cannot understand that part of the instructions; the balance before is plain and simple. Please explain, so that a beginner like myself will know what to do. White clover and poplar are in their prime here now; about half my bees appear to be working on poplar, the other half on white clover. Mercury stands at 81° in the shade at 12 m. Bees are crowding out queens with honey. I am trying to get my neighbors to use frame hives and Italianize, which some are making preparations to do.

J. A. P. FANCHER.

Fancher's Mills, Tenn., May 4, 1882.

[In the confusion incident upon removing the black hive and lifting out the frames one at a time, you will find enough bees, young and old, will run down from the combs and remain in the old hive to perform maternal duties, and to these young bees will be added hourly as they emerge from the cells, which will each require but a few days to be duly qualified as nurses. One principal object in brushing the combs in front of the new hive, is to get a fair proportion of the younger bees, which have not done field work, in with the older bees, to do certain drudge-work which they can best perform.—ED.]

Bees Light.—I have concluded to report this morning, as I have just finished overhauling my bees, doubling up, feeding, etc. So far, the spring has been the most discouraging (except that of 1879) I have experienced in my bee-keeping—6 years last April. We have had an abundance of fruit bloom, but the weather has been so very unfavorable that our best colonies have consumed more than they gathered. To-day it is so cold and damp that the bees are not flying, except where they are aroused by feeding. Owing to the exceptionally poor fall of 1881, and our present weather, bees are in a miserable condition to make a good showing for the season. I am compelled to feed my 33 colonies until something "breaks loose" for them to work upon. Many of them have only about half the amount of brood they should have at this time, and it will take close care to have them all ready for white clover, which promises much better than last season. We hope to get a good yield from basswood, as it was almost a failure last year. If it were not for the weekly visits of the BEE JOURNAL, which gives fresh courage, I should feel rather blue at times.

S. A. SHUCK.

Bryant, Ill., May 6, 1882.

Bee-Keeping in Colorado. — Every one knows how important is consultation where there are common interests to carry out. We have agricultural and horticultural societies to further the interests of those branches of industry, but there is no industry that calls louder for intelligent management and consultation than bee culture. When we consider that many bee owners are ignorant of the simplest operations of the apiary, it behooves us to do all in our power to impart that knowledge by which we can prosecute the science of bee-culture successfully. The exposition managers have offered their entire space to exhibitors free of charge. The enterprise is National in scope, and every industry will be represented. Any one wishing to exhibit, should communicate with the National Mining and Industrial Exposition Co., at Denver.

WOMANS' INDUS. ASS'N.

Denver, Col.

OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance. Special Notices, 50 cents per line.

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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies	(120 pages)	$1 00
" 100 colonies	(220 pages)	1 50
" 200 colonies	(420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

☞ From Dr. L. James, Atlanta, Ill., we have received a section filled with thin foundation, as described on page 309. The section presents not only a very neat appearance, but the foundation is fastened substantially, it having withstood transportation and considerable rough handling.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 15, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 8c. for dark and 10c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax, on arrival; 18@22c. for medium grade, and 15@17c, for dark.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand for comb honey is slow, and prices nominal at 16@20c. on arrival. Extracted honey is in fair demand. Our jobbing prices for 1 lb. jars of clover honey are, per gross, $25; for 2 lb. do., per gross, $42. The demand for manufacturing purposes is very good. We pay 8@10c. on arrival.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for honey is light, most of the trade finding fault with the best offered, as it is more or less candied. Values are not steady, prices being made to meet the views of the purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

CLEVELAND.

HONEY—Our honey market would be good, as there is considerable inquiry for white honey in sections, with none to satisfy the demand. It would bring 22c. readily for choice. Buckwheat honey, no sale. Extracted, 11@12c. per lb.

BEESWAX—25@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is no white comb honey in the market. We quote; Comb honey 11@16c.; extracted 7@11c.

BEESWAX—Scarce; 26@27c.

THURBER & CO.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—In fair demand. Strained selling at 8@10c.; comb scarce—nominal at 18@22c.

BEESWAX—Stiff at 21@22c. for prime.

R. C. GREER & CO., 117 N. Main Street.

SAN FRANCISCO.

HONEY—A little better tone is noted, owing to less favorable reports from some of the honey-producing districts. In Los Angeles county it is believed the yield will be light, but a good crop is expected in San Diego.

We quote white comb, 12@14c.; dark to good, 6@10c. Extracted, choice to extra white, 7@7½c.; dark and candied, 6@6¼c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Bingham's Smoker Corner.

Bayou Goula, La., May 2, 1882.

Messrs. BINGHAM & HETHERINGTON, Abronia, Mich.

Dear Sirs: The Conqueror conquers everything in the apiary. It is almost a fight between my three assistants, as to who will get it first in the morning. A single puff from it will fill a double story with smoke. I will use no other after this.

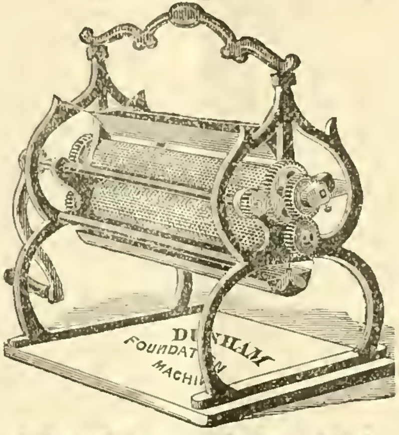
Yours truly, P. L. VIALLON.

ONE-PIECE SECTIONS a specialty. Pound size, $4.50 per 1,000. L. Hives 50c. Also, Italian bees for $8 per colony. Circular free.
8sm12tp BYRON WALKER & CO., Capac, Mich.

FRANCES DUNHAM,

Inventor and Sole Manufacturer of

THE DUNHAM



FOUNDATION MACHINE.

Patented Aug. 23d, 1881.

☞ Send for New Circular for January, 1882.

CAUTION.

Having obtained LETTERS PATENT Number 246,099 for Dunham Foundation Machine, making comb foundation with base of cells of natural shape, and side-walls brought up to form an even surface; also on the foundation made on said machine, I hereby give notice to all parties infringing my rights, either by manufacturing said machines or foundation, as well as to all parties purchasing machines as above, other than of my manufacture, that I am prepared to protect my rights, and shall prosecute all infringements to the full extent of the law. **FRANCES A. DUNHAM,**
15am4t DePere, Wis.

1882. Consult your interest, and send for my new circular and price list of colonies, Nuclei and Queens. Address,
9sm8t **S. D. McLEAN**, Columbia, Tenn.

TIN POINTS for GLASSING HONEY

Cut by machinery; are much cheaper and better than hand-cut, and perfectly straight; 1,000 to 5,000, 25c.; 6,000 to 10,000, 22c.; over 10,000, 20c.; 6c. per 1,000 extra by mail. Samples for 3c. stamp.
W. C. GILLETTE,
15sm5t LeRoy, Genesee Co., N. Y.

MY 16-PAGE PRICE LIST of Italian, Cyprian and Holy Land Bees, Queens, Nucleus Colonies and Apiarian Supplies, will be sent to all who will send me their name and address on a postal card. **H. H. BROWN,**
14smtf Light Street, Col. Co., Pa.

HEADQUARTERS FOR THE

Golden Italians & Original Albinos,

BEES AND QUEENS.

Send for Circular. **J. M. C. TAYLOR,**
10smtf Lewistown, Frederick Co., Md.

1882-Southern Headquarters.-1882

For Early Italian and Cyprian Queens;

Imported and Home-bred; Nuclei and Full Colonies. For quality and purity, my stock of bees cannot be excelled. I make a specialty of manufacturing the Dunham Foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Catalogue, giving directions for introducing queens, and remarks on the New Races of Bees. Address,
DR. J. P. H. BROWN,
5smtf Augusta, Ga.

$1 UNTESTED ITALIAN QUEENS.—We will furnish during June and July, 1882, a few Queens, daughters of mothers whose colonies gave us over 50 lbs. of extracted honey in April, 1882. Register letters.
20w1tp **J. W. K. SHAW**, Loreauville, La.

EARS FOR THE MILLION!

Foo Choo's Balsam of Shark's Oil

Positively Restores the Hearing, and is the Only Absolute Cure for Deafness Known.

This Oil is abstracted from a peculiar species of small **White Shark**, caught in the Yellow Sea, known as *Carcharodon Rondeletti*. Every Chinese fisherman knows it. Its virtues as a restorative of hearing were discovered by a Buddhist Priest about the year 1410. Its cures were so numerous and **many so seemingly miraculous**, that the remedy was officially proclaimed over the entire Empire. Its use became so universal that for **over 300 years no Deafness has existed among the Chinese people.** Sent, charges prepaid, to any address at $1.00 per bottle.

HEAR WHAT THE DEAF SAY!

It has performed a miracle in my case.

I have no unearthly noises in my head, and hear much better.

I have been greatly benefited.

My deafness helped a great deal—think another bottle will cure me.

"Its virtues are UNQUESTIONABLE and its CURATIVE CHARACTER ABSOLUTE, AS THE WRITER CAN PERSONALLY TESTIFY, BOTH FROM EXPERIENCE AND OBSERVATION. Write at once to HAYLOCK & JENNEY, 7 Dey Street, New York, enclosing $1, and you will receive by return a remedy that will enable you to hear like anybody else, and whose curative effects will be permanent. You will never regret doing so."—EDITOR OF MERCANTILE REVIEW.

☞ To avoid loss in the mails, please send money by REGISTERED LETTER.

Only Imported by HAYLOCK & JENNEY,
(Late HAYLOCK & CO.)
Sole Agents for America. **7 Dey St., New York.**
20w1y

Twenty-five Colonies of Italian Bees

At Nine Dollars each; Ten colonies to one address, Eight Dollars each. Twenty Colonies of Hybrids at Seven Dollars each. These bees are in good, new, story-and-a-half hives, Gallup frames, 12 frames in a hive. In all respects in the best condition. **O. CLUTE**, Iowa City, Iowa.
19w2t

PRIZE QUEENS FOR 1882,

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

FOR SALE—ITALIAN BEES.

Six or eight Colonies, in Langstroth hives. Address, J. C. OLDHAM, 9 East Main Street,
20w1tp Springfield, Ohio.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited and published by
C. N. ABBOTT, Bee-Master,
School of Apiculture, Fairlawn, Southall, London.

☞ We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 per annum.

Be SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian, Cyprian and Holy Land Queens and Bees.
J. C. & H. P. SAYLES,
4sm15t Hartford, Wis.

ANOTHER NEW IDEA.

Foundation all ready for business. Every sheet wired and bound around with a light wooden rim, ready to adjust instantly in your frame. No advance in price. Small sample for 6 cents. I shall also breed choice Italian and Holy Land Queens, practicing a new stimulative process. Write now for prices and particulars. Address,
9sm1y **JOHN H. MARTIN**, Hartford, N. Y.

Cyprian Bees
FOR SALE.

35 **COLONIES OF BEES**, having queens of last year's hatch, bred from a queen of the D. A. Jones importation. They are in J. E. Moore's improved double-wall hive of seven frames, with side and top storage.

They will be securely packed and delivered on cars from the 15th to 31st of May, at the following rates: 1 to 10 colonies, $8 each; 11 or more, $7.50 each.

Also, **50 New Swarms**, hived on finished combs, delivered on cars from 10th of June to 5th of July for, 1 to 10 colonies, $6.50 each; 11 or more do., $6 each. Reason for selling: The increase of our mercantile business prevents our giving the apiary the care and attention it should have. Remit by Registered Letter to

19w3t **J. E. MOORE**, Byron, Gen. Co., N. Y.

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **24c.** per pound, delivered here, Cash on arrival. Shipments solicted.

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL

Excelsior Dunham and Vandervort
FOUNDATION.

Owing to the large advance in the price of wax, I now quote prices thus: Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

J. V. CALDWELL,
3w1y Cambridge, Henry Co., Ill.

65 *ENGRAVINGS*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

4—RACES OF BEES—4

Italian, Cyprian, Holy Land and Hungarian Queens.—Warranted queens, $1.50; extra selected, $1.75; tested, $2. Send for my **21st Annual Circular.**

19wtf **HENRY ALLEY,** Wenham, Mass.

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street, Chicago, Ill.

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen	$4.50
2-frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1	2.50
" " per half doz., after July 1	13.50

Address, by Registered Letter or Postoffice Order.

DR. I. P. WILSON,
1wtf Burlington, Iowa.

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. *Sells at Sight*, Double your money Address Dr. Chase's Printing House, Ann Arbor, Mich
36m1yp

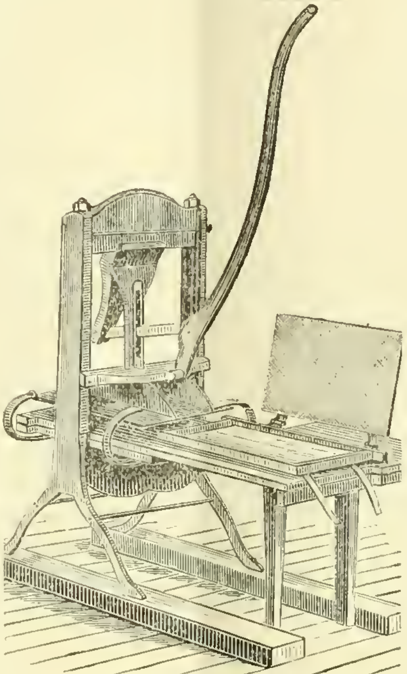
Complete Apiary for Sale.

An Apiary of **90 COLONIES OF ITALIAN BEES**, with buildings and all modern appliances for running the same; are within 23 miles of Chicago, in a splendid location for wild pasturage. These bees show a good record for last season—**2,664 lbs. comb honey from 43 colonies, and increased to 100 colonies.** They are in prime condition now, with

PROSPECTS OF A GOOD SEASON.

I want to go into other business this fall, and would sell now, giving the purchaser the benefit of this season's work (and my services if wanted), as an inducement to buy. Terms will be reasonable, and partly on time if necessary. Correspondence solicited.

H. W. ANDERSON,
17wtf **Gibson's Station, Ind.**



Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1w1y **D. S. GIVEN & C.**, Hoopeston, Ill.

1882-J. S. TADLOCK.-1882

LULING, CALDWELL CO., TEXAS.

Breeder of Pure Italian Queens. I use one of J. H. Nellis' best imported queens. Tested Queen, $2.50; per half-dozen, $13.50. Select Tested, $3; per half-dozen, $16. No "Dollar" or nuclei-queens handled. Safe arrival and satisfaction guaranteed, if possible. 14w39t

1882.-ITALIAN QUEENS.-1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby Smoker for $1.50. Address all orders to

L. J. DIEHL,
(Money Order Office)—Butler, Dekalb Co., Ind.
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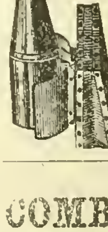

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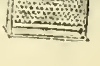

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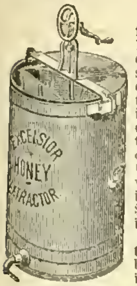

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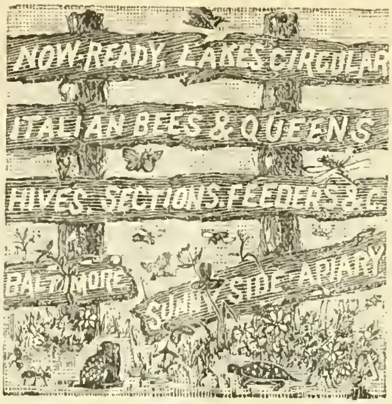

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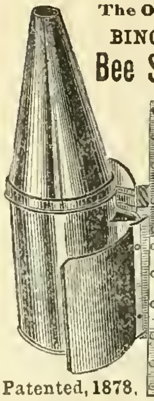

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TOPICS PRESENTED THIS WEEK.

Editorial—

Condemnation of Cheap Queens.......... 321
History and Composition of Glucose...... 322
Editorial Items.......................... 323
Bees and Honey at Fairs 324

Among Our Exchanges—

Historic Scrap........................... 325
Work During May in Texas 325
Bee Notes for June....................... 326
A Standard Frame.... 326
Fertile Workers.......................... 326

Correspondence—

A Bee-Keeper's Experience in the East .. 327
Lime Packing for Winter.................. 329
An Open Letter to Mr. Doolittle.......... 329
The Standard Langstroth Hive............. 329

Convention Notes—

N. W. Ill. and S. W. Wis................. 330

Selections from Our Letter Box—

A Puzzle................................. 330
The Journal a Necessity.................. 330
Bees in Western New York................. 330
Gone to Florida.......................... 330
Unfortunate.............................. 330
Entomological............................ 331
White Clover Prospect Good............... 331
A "Played-Out" Queen 331
Intruders 331
Extracted Honey 331
Various Matters 331
Convention at Grand Rapids, Mich......... 331
Bad on the Pets.......................... 331
Milkweed 332
Floating Apiaries........................ 332
Snow and Frost........................... 332

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Condemnation of Cheap Queens.

Several of our most prominent and successful apiarists have requested us to publish Prof. Cook's able and exhaustive article which recently appeared in the *Rural New Yorker*. We give the article entire, not because it is a reply to Mr. Hutchinson, but for its real worth from a scientific standpoint, and the much good it will accomplish by encouraging a pride in seeking for and breeding the best only. We view it as a virtual indorsement of the position we have taken on the cheap queen traffic, and the response it meets from the great mass of progressive bee-keepers is quite encouraging. The article was entitled "Dollar Queens," and is as follows:

I have been much interested in the discussions in the bee journals as to the policy of rearing and selling "dollar queens;" and no less so in the very candid article from my friend W. Z. Hutchinson, which appeared in a late *Rural*. Mr. H. need have no fear of giving offense. His very evident candor, truthfulness and honesty, must ever win admiration and esteem, and would leave no shadow of an excuse for any hard feeling on the part of an opponent. It is not argument and candor that hurt, it is invective and crimination. I am glad to know that Mr. H. is a gentleman, and so has no use for these latter weapons.

As to the effect of the "dollar queen business," I think that Mr. H. does not understand my position. I believe he has only to understand me to agree with me. I have no doubt, nay, I am sure that he makes the business pay. I am further certain that he does just as he says he will do—that he rears his dollar queens with as much care as he does any, that he breeds, only from his best queens, and that in all respects his dollar queens are just as good as the tested ones, bating their chance for impure mating—which with the care given to the matter by Mr. H. is slight. Nor am I at all certain that his tested are superior at all to the untested ones. In fact, I think, if I understand Mr. Hutchinson, I agree with him in nearly every point he makes. Yet, I believe that the "dollar queen traffic" had done more than any one thing to retard the progress of American apiculture. I believe it stands directly in the way of the best achievements. and accordingly anything that tends to throttle its existence is a blessing.

The breeding of bees, like the rearing of any other stock, is a matter that must not be hurried if we would secure the best results. Long watching, the most careful study, and the most rigorous weeding out are just as requisite here as in breeding the best short-horns. Does Mr. H. think that our short-horn cattle would possess their present excellence, had there been no greater inducement to hard and persistent effort than that held out to the bee breeder of to-day. It seems to me very patent that the "dollar queen traffic" has so cheapened queens that no person can possibly afford to take the pains that we ought to have taken, unless, forsooth, his bread-and-butter is secured by some other means. I wish we had breeders that could study their bees as did Hammond his sheep, and as hundreds of Hammonds are studying their sheep, cattle and horses all over the country to-day, and could select, mate and breed. not with rings solely in view, but with a far higher ideal in which mere coloration should form but a slight element; then we might look for real progress. I cannot find time with my numerous duties, to do this as I think that it ought to be done. Neither Mr. H. nor any other breeder can afford to do it. They would starve, far short of success; as, however well they might do, they could hope for no adequate remuneration, so powerfully has the late queen business tended to weaken the spirit of improvement. Our present system calls for economy of time, money and thought. But the maximum, not the minimum of care, is what will give us superior bees.

The point I make is just this: The energy and push put into the queen business of late—which energy was absolutely requisite to success, and then only the shrewdest business men could, if honest, make a living by rearing these cheap queens—have so cheapened the price of queens that there is no general demand for any other. But decided improvement can only come by the utmost pains in selecting breeding stock, both drones and queens, which in case of drones is very difficult, and requires the greatest tact, patience, and persistence. Now this very difficulty makes it necessary to have every inducement thrown in the way to incite any bee-keeper to undertake it. The prospect of a dollar or a little more for queens thus bred, would not only offer no such inducement, but would be the best possible extinguisher of all enthuiasm. More than this, to breed the ideal queen, will require such a rigorous weeding out that only a small proportion of the queens reared will be suffered to live. To support a family, the breeder of cheap queens must sell every one, and will then have great reason to rejoice if his ledger account shows a credit balance. In testing, Mr. H. only waits to see if the requisite number of bands are present. I would have him wait to see if the requisite number of eggs, bees and pounds of honey were forthcoming, and then when such assurance was gained, I would pay him $10 for the queen and make money, while I would lose in the majority of cases to pay $1 for the present queens. In buying several to test the matter, not however of Mr. H., I have won a blank at each venture.

Why did Avery & Murphy produce such a magnificent herd of cattle? Only because they took the greatest pains to secure the best material to breed from, and then used the best judgment and most consummate skill in crossing. Why did 25 cattle bring $50,000 at the recent sale at Chicago? For the same reason. Why the exercise of the skill and caution? Only because of the prospective thousands at future sales.

Unless there is some money-influence to induce to more time, caution, and painstaking in breeding bees, then truly the bee of the future, which should and will be as great an advance on the bees of to-day as are our improved cattle, hogs, etc., upon those of the last generation, will not find its advent in this generation. The only chance to escape this conclusion is for some bee-keeper to set to work—as I would do could I give time to it, and had I capital to warrant the undertaking—and work to advance his bees, with no thought of present profit, to spare no time, no pains, no study, no money to secure the ideal bee, and then create his own market by distributing his bees to the enterprising bee-keepers of the country, asking them to test them and then pay according to the worth of the bees. In this way he could hope in time to get pay for his time and labor, and would have the satisfaction of being classed with Bates and the Booths. Have we any. D. A. Jones, that can afford to undertake this work?

Ag'l College, Lansing, Mich.

History and Composition of Glucose.

The following is an interesting article by Jas. R. Nichols, M. D., editor of the Boston *Journal of Chemistry*, to which we would call particular attention:

It cannot be a mere matter of chance that substances used as food by men and animals are some of them sweet and others acid, or that some are sweetened with sucrose (cane sugar), others with glucose (grape sugar), and still others with levulose (fruit sugar). There is a wonderful adaptation of means to ends throughout nature. The sweet sensation is generally agreeable, as has been before stated, but it must be modified and adjusted, else it would become repulsive. If our fruits were all sweetened with pure cane sugar in differing proportions, they would lack a certain zest, due to a peculiar sweetness which they now possess; or, if our grapes did not form an exception to other fruits in the method of sweetening, they would not be the delicious fruit so universally esteemed. Apples, pears, peaches, and most other fruits are sweetened with levulose, or what may be regarded as a mixture of sucrose and glucose; and differing varieties hold unlike proportions, giving in conjunction with malic acid and certain essences the nice shades of flavor observed. The manufacture of sugar is not set up in fruits until the period of maturity is nearly or quite reached, and then the process is usually a gradual one.

The grape vine and fruit do not possess the power of grouping the atoms of hydrogen, carbon, and oxygen so as to form molecules of sucrose; the result of their work is confined to glucose. Hence a grape is never excessively sweet, or it does not reach a degree of sweetness beyond what glucose can furnish. If a grape were a solid mass of sugar it would not be very sweet, as the sugar is incapable of conveying to the taste any intense sensation. Every one who has tasted old or well-dried raisins has observed the hard lumps of sugar which frequently form, of considerable size, under the skin covering. These are lumps of glucose which result from the evaporation of the moisture in which it was held in solution in the grape. These lumps are deficient in sweetness, as has been observed from the earliest times. If this substance was supplied in large quantities from grapes or raisins, it would sell at a low price in the market. If a grocer sold it for pure sugar (cane sugar), it would probably come back to him again, and he would rightfully be charged with fraud. No shrewd dealer or manufacturer would sell it by itself as sugar, but those dishonest in the trade would mix it with cane sugar, and thus dispose of it with less risk of exciting suspicion. This is now a form of fraud of enormous magnitude, as will be presently shown.

During the wars of Napoleon I., early in the present century, he established the famous Continental blockade, by which all products of England and her colonies were excluded from the markets. This of course made sugar scarce and dear in France, and stimulated search for products which might be substituted. The grape crop of France was enormous, and as commerce was destroyed it was useless to make wine; so attention was turned to extracting the sweet principle of grapes. Syrups and sugars were made from grape juice in large quantities, and Napoleon ordered it to be used in the palace as an encouragement to its production. He issued several decrees in regard to its manufacture, and the celebrated chemists of the time, Proust, Berthollet, Parmentier, and others, were kept busy striving to perfect the products. Montalivet, the great minister of the interior in Napoleon's cabinet, in one of his reports, states that it has been ascertained that the grape sugar equivalent of cane is a little over two and one half to one. This is not far from correct.

Thus it is shown that the chemists of France were making glucose more than seventy years ago from grapes, and if they had known that it could be made as well from potatoes, corn, or any other cheap substance holding starch, the discovery might have retarded the great progress that soon followed in producing cane sugar from beet juice.

It was as early as 1747 that Margraff made his experiments showing that beets contained sugar, but it was not until Achard, the son of a French refugee in Prussia, took up the subject, and published the astonishing results of his researches, that it excited public attention. The difference between the two forms of sugar, that from grapes and that from beets, was easily seen, and Napoleon's attention was called to it by his corps of illustrious chemists. He immediately gave himself to the work of creating and perfecting this new industry, and in 1812 he had the satisfaction of learning from the reports of his minister of the interior that 334 factories in the empire were producing annually 7,700,000 pounds of beautiful cane sugar from beets. This seems almost like the work of magic, and illustrates the greatness of the man whose power was felt in every part of the civilized world.

The early attempts to extract sugar from beets in Napoleon's time were made subjects for fun and ridicule. The Emperor himself did not escape the lampoons of the wits of the age. A caricature was exhibited in Paris, in which the Emperor and the baby King of Rome were the prominent characters. The Emperor was represented as sitting in the nursery with a cup of coffee before him, into which he was squeezing a beet root. Near him was seated the King of Rome voraciously sucking a beet root, while the nurse, standing near and steadfastly observing, is made to say to the youthful monarch, "Suck, dear, suck; your father says it is sugar."

In manufacturing glucose from corn, the process is, first, to separate the starch from the other constituents of the grain, by simple mechanical means; and then, secondly, to act upon the starch with dilute sulphuric acid (oil of vitriol). When thick gelatinous starch is boiled for a couple of hours with this acid, a curious transformation takes place; the milky paste first changes to a fluid as limpid as water, and as the change advances this acquires a sweet taste, which is masked by the presence of the acid. If we now saturate the solution with some earthy carbonate, marble dust for instance (carbonate of lime), the acid is removed, and a sweet solution remains, which, after purification, may *be evaporated to a syrupy liquid*, or by *still further manipulation converted into a white solid*, which *is grape sugar*. This is the whole process for making "sugar out of corn," and it is simple enough. In this chemical transformation nothing is absorbed from the air, and no other substances but dextrine and grape sugar are generated, and the weight of the sugar exceeds that of the starch employed. What is still more wonderful, the acid used undergoes neither change nor diminution; it is all withdrawn in its original amount after the boiling is completed. If it could be withdrawn in its clear, uncombined state, one carboy of oil of vitrol would serve to change all the corn grown in the United States into grape sugar. Theoretically, one pound of corn ought to make a pound of solid glucose, but in practice it does not quite do this. The cost of *solid glucose* to large manufacturers cannot exceed three cents a pound, and it may fall considerably below this.

Nothing can be more paradoxical to the popular reader than the statement that sugar is produced by the use of one of the most powerful mineral acids known to chemists. To explain clearly and fully the chemistry of the reactions involved in the process would require more space than we have at command; and also, to understand the nature of the changes, more scientific knowledge would be required than is possessed by ordinary readers.

Glucose is a cheap, imperfect substitute for the genuine sugar of commerce. It is not a poison when well made, and, as regards its healthfulness, it may not be much more deleterious than ordinary cane sugar. Still, it does *produce and aggravate dyspeptic symptoms*, and by its proneness to set up fermentative processes its use *causes flatulency and painful affections of the bowels*.

What becomes of the millions of pounds of glucose manufactured in the Western States every month? It is used mostly as an adulterant in the manufacture of table syrups, and in adulterating the dark, moist sugars used largely by the poor. Its next largest use is in the manufacture of candies. All soft candies, waxes, taffies, caramels, chocolates, etc., are made of glucose. Children are therefore large consumers of this substance; the *honey bees*, also, are fond of it, and will carry it away by the ton, if placed within their reach. The honey made from it is *no better than the pure glucose*, as it is stowed away in the comb without change.

A mixture of true "sugar-house" syrup with glucose syrup, in proportions of five or ten per cent. of the former, to ninety or ninety-five per cent of the latter, constitutes the high-priced "maple drip" of the grocers. A Western chemist reports the results of recent analyses in which adulterations amounting to from five to fifteen per cent. of glucose were found in various popular brands of sugars.

In this brief consideration of the nature and uses of a comparatively new article of manufacture, the astonishing fact is disclosed that this year more than twelve million bushels of corn have been manipulated to produce an article employed almost exclusively as an adulterant to one of the most common and important constituents of food. It is a reprehensible form of fraud, and should be arrested by laws similar to those which govern the sale of "oleomargarine" compounds. Every package of this sugar should be stamped glucose, and sold as such; and every mixture made with it should be accompanied with a statement, stamped upon the vessels which hold it, giving the exact percentage of glucose contained in the adulterated sugar or syrup. A law similar to that which is found on our statute books regulating the sale of fertilizing compounds would be effective, if energetically enforced. The loss to purchasers in the glucose syrups is enormous as the quantity required to sweeten substances is at least twice as great as when cane sugar is employed, and the use of this quantity of the agent renders it *deleterious to health*. The attractive appearance of the syrups, which are white and clear, gives them a wide sale at high prices, and all consumers of sweets in the country are *victims to a form of fraud* which deserves the prompt attention of our law-makers.

Because of its scientific and historic character, the foregoing article will be read with interest, and although Dr. Nichols may disagree with the BEE JOURNAL in some points, still we do not differ as to the effects produced on the human stomach by its constant use. He states most positively that "it does produce and aggravate dyspeptic symptoms," and causes "flatulency and painful affections of the bowels;" that it is "deleteriou to health," and that consumers of sweets are "victims to a form of fraud which deserves the prompt attention of our law-makers," and that it "should be arrested by law."

As to the difference between glucose and grape sugar, Dr. Nichols says that glucose is a "syrupy liquid;" by "further manipulation" it may be "converted into a white solid, which is grape sugar;" the only distinction being that one is a "syrupy liquid" and the other a "white solid," both being made from the same material in precisely the same manner. It will be readily seen that the assertion made by Mr. A. I. Root in *Gleanings* for December, 1881, page 619, that "grape sugar and glucose are two *distinctly* different articles," is but a creation of his fancy, to evade the force of the argument against the use of glucose, when he was defending the use of grape sugar for feeding bees.

* * *

☞ Should any of our patrons be suffering from disease and wish to obtain rest and quietude, as well as experience the remedial effects of mineral waters, they may be glad to know that "Jordan's White Sulphur Springs" is one of the most beneficial and pleasantly located of its class, but the attraction to bee-keepers would be the fact that the proprietor, Mr. E. C. Jordan, is an enthusiastic bee-culturist, and has an extensive apiary there, which supplies in abundance the tables of that institution. His new descriptive circular of 24 pages is on our desk, and a copy will be sent free to any one desiring it. Address E. C. Jordan, Stephenson's Depot, Frederick County, Va.

* * *

☞ Last week a correspondent addressed a letter to us in this manner "A. B. J. Chicago, Ill." After wandering around, it finally came to us to know if it was intended for the BEE JOURNAL. It caused several day's delay and made much trouble to the postoffice employes—as there are *nine* postoffices in the city of Chicago. If any one wants to be brief address thus, "BEE JOURNAL, Chicago, Ill.," —but please don't try to puzzle the postoffice clerks, and risk the safety of a letter by using what may be to them cabalistic signs or meaningless initials.

* * *

☞ It is with much gratification we call attention to the resolution adopted by the N. W. Illinois and S. W. Wisconsin Convention, which will be found on page 330. If all Conventions would pursue a similar course, it would do much to strengthen the hands of those who are fighting the adulteration swindlers, and remove the prejudice against extracted honey.

Bees and Honey at Fairs.

Public manipulations with bees and magnificent honey exhibits will soon become the most attractive features of State, County, and District Fairs. There are many good reasons for introducing such, but the chief one, perhaps, is that those who produce honey for the market may be induced to present it in the most marketable shape; for the new methods and new ideas of practical management must take the place of the old and undesirable ones.

It is our aim to make honey a staple product. To this end we have endeavored to popularize the consumption of honey by the masses, as well as to raise the standard of production, by applying correct principles and progressive art to the management of the apiary.

Bees and honey are already the great attraction at such fairs as have given prominence to this industry—and this will become more apparent each successive year. The officers of the St. Joseph, Mo., Exposition were surprised at the result of their experiment in encouraging the apiarian department; they realize the fact that it formed the greatest attraction presented by the Exposition. The editor of the *Gazette* gave his views of the subject in the following article:

> Few things last week brought us so many pleasant and profitable things combined—as the display of honey made at the fair, and the lecture of Mr. Newman, of Chicago, on "Bees and Honey." The attention given to the subject this year marks a new era; the display attracted very great attention; good prizes were offered and awarded; the bee-keepers of the region were encouraged, and a more general interest was aroused in the subject. The lecture was very practical, and contained many hints that are invaluable. But practical as it was, the pleasure of the apiary as well as the profit was told; for Mr. Newman is an enthusiast, as, to use his own words, all bee-keepers are.

Mr. Musser, superintendent of the department, wrote as follows:

> The exhibits of last year have worked up quite an interest in progressive apiculture in this vicinity. Many then, for the first time, saw the new apiarian improvements, single comb sections, comb foundation, etc., and had never heard of planting anything for their bees to get honey from. Not one cent in premiums was offered last year, but this year over $120, besides diplomas are offered, and next year I know we can double the amount.

The managers of the St. Joseph Fair, have, by their foresight, given a good example for others to follow, and we hope the time will speedily come when apiculture, so long neglected by the managers of fairs, will receive its due share of attention. Liberal premiums should be offered for the best exhibits, and these premiums should cover a large variety of special points in order to make the competition the more lively, as well as to enhance apiarian science in general.

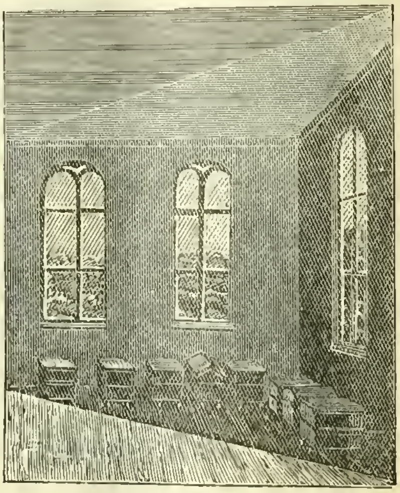
The time has now came when arrangements for honey and bee shows must be completed. Vice Presidents of the Continental Society should *at once* see the Fair Committees throughout the country and have a liberal premium list announced. We suggest something like the following:

	First Prem.	Second Prem.
Best display of Italian Bees	$25.00	$15.00
" " Black or Native Bees....	20.00	10.00
" " Home-Bred Queens......	25.00	15.00
" " Imported Queens.........	10.00	5.00
" " Comb Honey, not less than 50 lbs............	25.00	15.00
" " Extracted Honey, not less than 50 lbs........	25.00	15.00
Best Colony of Bees in Hive, including manipulation.	25.00	15.00
Best display of Apiarian Implem'ts.	25.00	15.00
" " Seeds for Honey Plants, with common and botanical names.........	25.00	15.00
" " Foundation for Brood Chamber................	15.00	10.00
" " Foundation for Section Surplus Honey........	15.00	10.00
Best Bee Hive for all purposes......	15.00	10.00
" Honey Extractor...............	5.00	diploma
" Wax Extractor....................	5.00	"
Best display of Honey Pastry, etc..	5.00	"
" " Honey Wines and Beverages	5.00	"
Best Sections or Boxes.....	5.00	"
" Packages for Extracted Honey, with Labels...............	5.00	"
" Bee Smoker......................		"
" Honey Knife.......		"
" Bee Feeder.......		"
" Blanket or quilt for bees		"
" Bee Veil or Face Protector		"
" Gloves or Gauntlets for handling bees.......................		"

Some of the above sums may seem slightly extravagant, to persons who have never seen bees and honey figure to any considerable extent in agricultural and mechanical exhibitions and fairs, but to any reflecting individual, who takes into consideration the magnitude of the bee-keeping interest at the present time, and the illimitable millions of pounds of honey now "wasting its sweetness on the desert air," from want of the proper encouragement and development of the industry, the figures will seem modest indeed. Bee-keeping should rank one of the foremost, if not the foremost, feature at these great gatherings. We respectfully suggest to all who have the management of fairs, that a day be set apart during the season for public manipulations and explanations on this subject, and soon these *industrial days* will become as popular and attractive to the public as are now the "speed days" of horses, or the "trial days" of reapers and plows.

The following is a convenient method of exhibiting bees at Fairs; One corner of a room on the second floor of a building on the Fair grounds is enclosed by mosquito bar—the hives of bees being inside, with a tube connecting with the entrances running through the sides of the building, allowing the bees free passage in and out of the hives. Manipulation or examination of the bees, may be accomplished by going inside the netting, and no one outside need be disturbed by the bees. This has been practiced with success at several Fairs in this county.

When in Great Britain, during the summer of 1879, we found that the most attractive features of the fairs were the public manipulations with bees, and the large display of honey of captivating beauty. There they had a large tent, the inner circle being enclosed by mosquito bar or netting around the sides and about 8 feet high, and 6 feet broad; in this inclosure the audience assemble to witness the manipulations with bees.



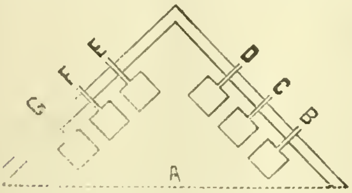
Corner of Building, inclosed with Netting, for exhibiting Bees.

We gave eight half-hour lectures in this tent; each time the inclosure was full of eager listeners. Two of these were delivered at the Scotch Bee and Honey Show, at Perth, concerning which the Dundee *Advertiser* remarks:

> The manipulating tent was a scene of great interest during the show. It is of octagon shape, the operator standing in the middle, while the public feel secure under the protection of an intervening gauze screen. Driving bees from a straw skip and transferring their combs to a bar-frame hive, were hourly operations,

and never failed to strike with astonishment the spectators, who stood aghast at seeing a human being unprotected turning up a hive of bees, and handling them as if they were blue flies. Mr. Thos. G. Newman, editor of the AMERICAN BEE JOURNAL, was present, and gave lectures on American bee-keeping, which were very interesting. The Society presented to him a medal as a souvenir of his visit to this country, and for the valuable services he has rendered to the present session of the Society.

For exhibiting bees, observatory hives were used—those having glass sides, through which the bees may be seen at work—the hives being inside the exhibition building, with a tube covering the entrance, and running through the side of the building, giving free passage, in and out, for the bees. Sometimes, a glass box inclosing each frame, arranged like leaves of a book, with a common entrance to all of them, from the tube running through the side of the building, is made to exhibit bees. This gives an opportunity for thorough examination of the whole colony. A correspondent in the London *Horticultural Journal*, says:



Corner of Building showing Position of the Entrance Tubes to the Hives.

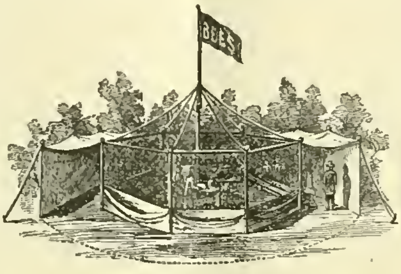
I can state without fear of contradiction that never in the memory of man has there been such a desire to keep bees as at the present time. People here have been so encouraged in bee-keeping as taught in the bee tents, that I have almost daily applications for instructions concerning bees and hives.

In a private letter, a gentleman in England says:

The American honey introduced into this country in the "prize" boxes, has exercised a complective influence upon the honey show this year. The season being more propitious than last—the large number of American surplus boxes imported into this country, have gone into use, and the ninety-eight different exhibits, displayed at least a variety never found at an American fair, while the highest prizes in any class, were awarded to the honey in American sections.

Concerning the Toronto Bee and Honey Show, Mr. Wm. F. Clarke says:

Under the stimulus of the liberal prize list, there was a magnificent array of honey. The directors appropriated an entire building to the use of bee-keepers, and for the first time at a great exhibition on the American continent, "honey hall" advertised itself side by side with horticultural hall, dairy hall, etc. Honey was displayed in every form, calculated to make the mouths of spectators water. The tin packages and cans were gorgeously colored and labeled; the glass jars were in various beautiful shapes, and even the wooden boxes displayed a wonderful diversity of taste. In the center was a miniature church, ingeniously built of honey comb and wax, with pinnacles and spire. A smashing trade in honey was done at the exhibition. Thousands of people might be seen with gay-looking tin cans dangling from their fingers, or with pretty glass jars in their hands, or nice boxes under their arms. They bought and carried them home very much as is usually done with toys and trinkets on such occasions. The success of this show awakens great expectations as to the future of bee-keeping in this country.



English Bee Tent.

Of the Honey Show in San Francisco, Cal., the *Semi-Tropic* said:

The attractive display of bees and honey formed a center around which apiarists literally swarmed. One hundred and two varieties of honey-producing flowers, formed a novel and interesting feature of this exhibition. The decorations of white sage were tasteful and appropriate, and the nectar itself, in jars arranged in pyramidal shape, clear as crystal, supported by frame after frame of comb honey, snowy and inviting, made a picture which cannot be photographed except by the artist memory. There were samples of excellent honey vinegar, almost colorless, and above average in acidity; several samples of fruit preserved in honey with undeniable success, and three kinds of honey cake, which elicited the warmest praise from those who were fortunate enough to secure a sample. Fruit cake made with honey is richer and retains moisture much longer than that made of sugar.

* * *

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Historic Scrap.—The Baltimore *Sunday Morning* gave a description of the "Sunny Side Apiary" in that city, and adds:

This apiary was, in the days of the late Richard Colvin, the experimental apiary of the firm that then existed, composed of the late Samuel Wagner, founder and former editor of the AMERICAN BEE JOURNAL; L. L. Langstroth, the inventor of the movable frame hive that bears his name, and Richard Colvin, of this city, to whom the bee-keepers of the present day owe their deepest gratitude for bringing out the many useful appliances, introducing new varieties of bees, and various implements connected with bee management of the present day. It was here the first Italian bees were received that ever came from Italy. Mr. Lake still has in his possession the original hive in which they were received, a great curiosity to visitors.

* * *

Work During May in Texas.—Dr. J. E. Lay writes to the Texas *Agricultural Journal* as follows:

Our main honey flow for this section of our state takes place during the month of May. It comes from the famous horsemint, a plant belonging to the mint family, the botanical name of which is, if I am not mistaken, *Monarda Punctata*. It begins to bloom generally about the 25th of April, and ends about the 10th of June, continuing in bloom about five or six weeks. It furnishes a clear, amber colored honey of pleasant aromatic taste, very rich and thick, and I presume will be par excellence our market honey for this vicinity.

Now as it is of primary importance to obtain as much of this choice honey as possible, it is absolutely necessary that our bees have all the aid that an intelligent master can give them. We will suppose that during the three months previous all swarming and dividing has been accomplished, all colonies equalized by building up the weak from the strong, or if needed in any case, a quantity of pure white sugar syrup was fed to meet any emergency; and now, that all are ready for business.

You will perceive that the bees seem to have but one thing in view during the continuation of this bloom, and that is to fill every possible space with honey. As a rule, about the 15th of April is the time to put on supers for surplus storing, but this spring my bees were working rapidly in the upper stories of frames as well as in the section boxes by the 1st of April. By close observation the master will know how and when to lay out work for his ever willing servants, and he should avail himself of the earliest opportunity to obtain this beautiful spring crop. We should have no arbitrary rules to govern us, but each bee-keeper should take advantage of an early spring. He should also become acquainted with the honey-bearing flora of his immediate vicinity, and be ever ready to reap to the best advantage. It is well to keep a record of such plants, which will give us valuable aid for future reference. I keep a note each year of the beginning and ending of every bloom from which bees gather a noticeable amount of honey. We must be on the alert this month (May), and see that the queen of each hive has ample room to deposit eggs, that the colony may not become depleted and thus fall an easy prey to the moth. Use the extractor and replace the empty combs, or give them frames of foundation in the brood chamber, having raised the nearly filled frames to the upper story; and if section boxes are used, take them off as soon as sealed and supply them with empty ones containing nice thin foundation very near the full size of the box.

Bee Notes for June.—The *American Agriculturist* for June is received and contains the following as its "Bee Notes for June:"

In all the Northern States, June is the great honey month. The bees are already bringing in this delicious product from the raspberry, the white clover and alsike clover, and before the month ends, the basswood bloom will bring the bees to the great honey harvest of the year. Every bee-keeper should ask and answer for himself: Shall we work our apiaries for comb-honey, or plan to get all, or most of it, as extracted honey? This question was recently asked in a meeting of one of the most wide-awake societies of the country, and all but one answered: work wholly for extracted honey. The unanimous opinion was, that nearly double the weight of honey would be thus obtained, which readily sells at 12½ cents per lb., or more, while the nicest comb honey is only worth 20 cents, the general price being 18 cents. And this is not merely local opinion. Three-fourths of those at the National Convention last autumn, follow this method. The extracted honey is intrinsically as good as the comb honey, and is more nutritious. The wax of comb is neither easily digested nor nutritious. If there is not a present market for extracted honey, one can be readily created.

The honey extractor is coming into general use, and justly so. It is a German invention, is comparatively simple, and not very expensive, and by means of this the honey is thrown from the combs by centrifugal force, when they are returned to the hive to be filled again. If taken from the hive before they are capped over, it saves work and time to the bees. If not removed for extracting before they are capped, the caps are cut off with a sharp knife run over the comb. There are various machines now made. They should be of metal, run with gearing, be light and strong, and so made that only the basket carrying the combs is revolved, leaving the can or reservoir stationary. They should be large enough to leave space below the basket for at least 100 lbs. of honey.

If we are to work simply for extracted honey, the hive may be very simple, and either one story, or two. I think better results are secured from a one-story hive, though a two-story one looks better. The late Mr. Quinby, who had no superior as a practical apiarist, once offered $50 for a non-swarming hive. By a faithful use of the extractor, almost any hive becomes a non-swarmer—a point in favor of extracting.

When necessary to uncap some of the cells, uncapping knives, made with a beveled edge, are the best. In extracting during the honey season, it is never advisable to wait for the bees to cap the honey. If the honey is kept in a dry, warm room, and it should be kept in no other, there will be no danger from souring, even if the honey is extracted when quite thin. We have frequently extracted during the honey season as often as every other day, and with no bad results. We would not dare do this, if the honey must be kept in a cool room, especially a damp one. The best place to keep extracted honey is a room that is warmed up to 70 or 80 degrees Fahrenheit, each day, when the sun shines hot. Put the honey in open barrels or cans; cover with cloth that will keep out the dust, but not prevent evaporation. In extracting, care should be taken not to take away so much as to starve the bees the coming winter. The bees can be fed, but that may be neglected, and so honey enough should be reserved. Honey may be extracted from combs with brood, and not throw out the brood; this requires a very even motion. A sharp, sudden jerk will remove most of the bees from the comb; the remainder may be removed by using a bunch of asparagus, a pine twig, or a quill from the wing of a goose or turkey.

If the market makes it more desirable to work for comb honey, sections should be used. Those 4¼ inches square and holding one pound, are the most profitable as they find a ready sale. The sections may be placed in a crate above the brood chamber, or may be suspended in the body of the hive in a wide frame. Sometimes the bees are slow to go into the sections above the hive. In this case it is quite desirable to have the sections so arranged that they may be readily transferred from the body of the hive to the rack above. They are put into the body of the hive until the bees commence to work in them, and then are removed to the rack above where the bees will continue to work. Putting a small piece of uncapped drone-brood into the sections above, will sometimes induce the bees to commence work there. As the brood hatches out, the bees will fill the cells with honey, and no harm is done.

To secure a good yield of comb honey, the colonies must be strong, and to have them thus, and not be bothered with swarming, requires skill and care. A much more skilful bee-keeper is needed to obtain the best results with comb honey, than to procure the best harvest of extracted honey.

A Standard Frame.—Mr. G. W. Demaree, in the *American Bee-Keeper*, remarks as follows:

While watching the drift and current of the bee literature of the past, I have noticed that the subject of bee hives and "frames" has periodically come up for discussion. There is about the Langstroth frame a history the most remarkable of anything connected with the inventions of the past, so far as they have come under my observation. The Langstroth frame ushered in the great modern system of bee-keeping, and has lived through the stormy period of the past 20 years defying the inventive genius of the American people. Thousands of efforts have been made to supersede it with something better,—with a better frame for all purposes. But not even a large minority of bee-keepers have at any time been induced to accept of anything as being superior to the old "L. frame." I do not say that the Langstroth frame will never be superseded by an improved one. I have much confidence in the inventive genius of the American people. I set no limit to what may be done. The chief objection urged against the Langstroth frame is that it is too shallow and too long to winter bees to the best advantage. There is perhaps some truth in this, but it is an argument similar to that used by Mr. A. I. Root in favor of his "simplicity bee hive," viz: that they stack or pile up so nicely, etc. Well, I have no use for a hive to pile or stack up, neither do I have any use for a frame that is good for nothing but to winter bees on. What we want is a frame that answers all purposes.

Fertile Workers.—The *American Bee-Keeper* gets off the following in its April issue on this subject:

"Fertile workers we believe to be a myth, as we have been keeping bees all our life and have never seen such a thing as a fertile worker."

From the above it would seem that the editor of the *Bee-Keeper* doesn't believe in anything except what he sees. Following out this course of reasoning, as he has never seen his brains, he would be compelled to confess that he has none. This may not be very reasonable, but nevertheless it is logical. Now, we know there is such a thing as a fertile worker, because we have seen more than one of them. Mr. Harrison believes there is no such thing, because he has never seen one. That is the difference.—*Bee-Keepers' Instructor*.

CORRESPONDENCE.

Read before the British Bee-Keepers' Ass'n.

A Bee-Keepers' Experience in the East.

T. B. BLOW.

The Cyprian and Syrian races of bees having of late years come prominently into notice, and there being a great difference of opinion as to their merits, I determined to make a visit to these lands and see them in their native state, and so be able to form an accurate and unbiassed judgment.

My original intention was to travel *via* Trieste, Corfu, and Rhodes, take observations, and bring colonies and queens of the various races of bees inhabiting the Eastern shores of the Adriatic. I found, however, that my engagements in England would not permit of such a long absence as this extended tour would require, and, therefore, I determined to go direct to Cyprus and thence on to Syria.

My starting-point was Liverpool, the vessel, on Sunday, 11th December, touching first at Algiers. Owing to my short stay there I was unable to pay any attention to the bees of North Africa. The next port was Malta, and I was interested to find the bees were black. This raised a suspicion in my mind that the bees of South Italy and Sicily were black, and this has been confirmed by Mr. Benton in last month's *British Bee Journal*. He states that black bees do occur in Italy. When we consider that the bees of the Eastern shores of the Adriatic are black, I think that there can be little doubt that the yellow Ligurians of North Italy were originally bees of the extreme East, brought there ages ago by the Romans, and that they have since become a distinct local variety.

Cyprus was reached in about 15 days, and I took up my abode at the English club, there being no hotels in Larnaca. I determined to remain at Larnaca a few days to get a little idea of the sort of people I had to deal with, and to make the necessary arrangements for the journey up into the interior. Happening to mention my business, I was told that an American bee merchant resided in Old Larnaca; and, as I knew this could only be Mr. Frank Benton, I resolved to at once make his acquaintance. I found that he was just about to leave Cyprus, and was, in fact, packing his bees for transit. As I was not going up country for three or four days, I paid him frequent visits, and assisted in packing up his hives. I thus had great opportunities of observing how the bees conducted themselves in their own land in modern hives. Mr. Benton, too, freely gave me much valuable and interesting information, which I shall touch upon later on. Landing in a strange country, it was indeed good fortune to meet with such pleasant people as Mr. and Mrs. Benton, and I have a vivid and grateful recollection of the many kindnesses they showed me.

Not speaking modern Greek, my first search was for a guide and interpreter, and I found they were scarce enough in Cyprus. Some, who were otherwise suitable, did not speak English; others, who did, did not know the country well; and at last I had to fall back upon one, by name Spero, whose character, as given to me in Larnaca, was not the most favorable. To be forewarned is however to be forearmed, and I therefore felt able to contend with him. I found that he had many good points. He never allowed any one, besides himself, to rob or cheat me; he spoke fair English, knew the island well, and all the people therein; was a fair cook (though, in a testimonial he showed me, and which he seemed to value very highly, he was described as an 'indifferent cook'); was able to provide mules, and did not get intoxicated more than once or twice a week. I entered into a contract with him to supply his own services, three mules, one muleteer, and the best food and lodging that the villages could afford for any number of days that I might think fit; and I must say that he carried it out well.

A start was made on Monday morning, January 2. In the mule bags were placed 48 small hives which I had brought out with me. As I desired to get the bees from the hills rather than from the plains, where tropical heat prevails in the summer, we struck in the direction of the mountain called Stavro Vuni, or mountain of the holy cross. Inquiries were made at the various villages through which we passed, but the people were not willing to sell their bees; and Spero assured me that in some cases I was mistaken for an official, and they feared that some taxation of the bees was intended, and therefore they declined to have any dealings. The fact that all the people live in villages only, of course, made it very convenient, for we had not to run from house to house a mile or two apart, as would have had to be done in a country where the people dwelt in scattered habitations.

The first village where bees seemed to be in great quantities was Hagia Anna, but the people would not sell at any price. We passed the village mill in leaving, and the miller hearing what was required informed us that a man who owned 100 colonies was deeply in his debt. and he would see whether he was willing to sell. However, we found that the man had gone to Larnaca, and nothing of course could be done. The miller very much pressed me to wait, evidently seeing a fair chance of getting his debt. We proceeded, however, and, passing through many villages with but few bees, we arrived in the evening at Lithrodonda, a large village wherein were many hives. There was no inn in the village, but as Spero knew the parish priest, we put up there, and were very courteously received, the best room being set apart for my use. We adjourned to the cafe, and told the assembled gossips our business, and two or three persons set off to call the bee-keepers of the place. They evidently were not anxious to sell, and this seemed to be the case everywhere, and Spero explained it in this way. For two years the people had had good crops of corn, wine and oil, and were well off and out of debt, and therefore did not much need money. One, however, had 6 to sell, and after long haggling we got to within about 1*s*. per lot of each other, but as I declined to advance, and he was unwilling to retreat, the bargain was not struck.

We returned to our quarters at the priest's, and it was soon evident that he and Spero were old cronies together. They soon waxed merry over their wine and mastic, and the priest, being told of our difficulty in bargaining, announced his intention of going to see the people, who were his relations, and to try and complete the sale. He soon returned, and told me that the bees were mine. This being satisfactory I retired. The furniture of my room consisted of a kind of shutter against the wall at one end, and supported on two legs at the other. This, with a somewhat thin collection of clothes, formed the bed. Great care was necessary, or the whole affair would have come to grief. Washing appliances did not seem to be considered necessary, and the people evidently were not fond of the application of water. A beeswax taper stuck against the wall, and the list of furniture is complete. To levy a distress on the furniture of a village home in Cyprus would be somewhat of a farce.

I rose early to get the bees, but found the man had been persuaded by his wife to run back from his bargain, and though the priest came down and tried to persuade them, and Spero fetched two zaptiehs, or policemen, they would not let us have them. However, we heard that a man had been to the village mill that morning, and, hearing that we wanted bees, had offered to sell. His place was more than one hour distant, but I determined to go. Here, again, the man's wife was the impediment. She, hearing that we wanted the bees, positively declined to allow her husband to come out of the house to see us. She stood in the doorway and kept guard over him, and inside he had to remain, and we to go back to Lithrodonda without bees. She—sensible woman—said that if her husband got the money for the bees he would spend it in wine, and next year she should have no honey. Arriving back in Lithrodonda, we found that our old friends there had repented that they had not sold the bees, and I therefore got the 6 lots.

There not seeming much chance of getting more bees near, I decided to go back to Hagia Anna, and see whether the debtor of the miller had returned. He had, but during his visit to Larnaca he had got some money and paid the miller, so no bees were to be had. He, however, kindly offered to sell his bees at 100 piastres (over 10*s*.) a lot, not to pick them, but take them from the stack. I should remark that the bees are kept in clay cylinders, about 3 feet long and in diameter 15 inches at one end tapering to 10 at the other. These clay pipes are stacked in large piles, sometimes as many as 50 to 100 in one stack.

The accommodation at Hagia Anna was wretched. I had a mattress spread on the stone floor, and my saddle-cloth.

Next morning began the third day, and only about 6 lots of bees collected. I began rather to suspect that Spero was not trying his best to get me bees, but prolonging the journey a bit, that of course being to his advantage. I intimated as much, and Spero assured me that at a village about 15 hours off there were only 7 houses and 500 lots of bees. This looked promising, and as there were many villages on the route I decided to go. The village was hard by the monastery of St. Chrysostomos, and, I believe, nearly 2,000 feet above sea-level. We journeyed all day, and at evening stayed at a village at the foot of the mountain range running along the north of Cyprus. Here we stayed with the parish priest, who was a bee-keeper. He said that he had 300 colonies last year, but a hot wind came and melted the combs and destroyed the bees. His present stock was 3 lots only. He was very kind, and offered, had it not been so near Christmas, to have procured bees. I did not care to have them from such a warm place however.

In the morning we proceeded towards Kutzo Venti, but the progress was both slow and dangerous, owing to the heavy rain that had fallen in the night. The path up the mountains ran along the tops of deep ravines, and in many places had been washed almost away, and rendered very unsafe. About noon we arrived at this wonderful apiary of 500 colonies. Truly, there were 7 houses, and perhaps 50 lots of bees. The people would not sell at first, but consented, just as we were starting off, to let me have 7 lots; but on these conditions, —the cylinders were not to be moved out of the stack, neither were both ends to be opened. Being anxious to get bees I accepted these terms, but before I had got the first lot out I found that I had made a bad bargain. The seven lots I purchased were distributed about a stack of about 40 to 50 cylinders, and, as it was a warm day, the bees were flying strongly. In removing the ends of the cylinder I had to jar the pile considerably, and the consequence was that I had the bees of the whole 50 hives around me, and did not they sting? At first their owner and Spero had offered to assist, but not many minutes had elapsed before they fled howling in all directions, and I was left alone to fight the battle. I saw I should get worsted, and retired to the house, where I found the others extracting the many stings.

I offered the man a sum to let me off the bargain, which he did, and I retired from Kutzo Venti somewhat crestfallen. I upbraided Spero for deceiving me, and announced that I would go to Kythrœa. He assured me that no bees were kept there, but I insisted on going. This was the fourth day—result, about 8 lots of bees, Spero said that we could do no business during the next two days, it being the Greek Christmas. I suggested that we should return to Larnaca in that case. He at once changed and said he would do his best if I would not return.

After a few hours' riding we reached Kythrœa, and a more lovely valley I had rarely seen. Streams of spring water ran down each side turning innumerable mills. The orange and lemon groves were almost continuous; every moist wall was a carpet of maidenhair fern, and crocuses and anemones in places almost carpeted the ground. Bees, too, were everywhere, and I believe that the valley, though only about 2 or 3 miles in length, contained more than 1,000 colonies. In many cases the cylinders were built into the walls of the houses and the bees' entrances were in the streets, and these streets narrow ones too; I never, however, heard of the people getting stung. The roots, too, were covered with hives. The people here seemed a more business-like race, and before night about 13 lots had been purchased. The news that bees were wanted quickly spread, and, though it was Christmas day, the people after they had been to church were not at all averse to business. The priest too, was a most amiable man, and did all in his power to get me the bees, and with the result that before noon more than 40 lots were mine.

The next difficulty was transit. Most of the hives were grand stocks, and I did not like to transfer them into my little boxes. I therefore determined to convey them to Larnaca on mules in the cylinders and there transfer into larger hives. The mule and donkey owners of the village were called and demanded double rates owing to Christmas time; but after a lot of bargaining they consented to take a fare and a half, and I hired in all about 27 animals. Packing up 40 cylinders to be ready the next morning at 7 was no light task. I worked like a slave, and it was far into the night when my labors were completed. Each mule had two cylinders to carry, and, as each was loaded, the former owners of the bees fumigated both bees and ourselves by burning sweet-smelling leaves on little charcoal dishes to ensure that both ourselves and bees should prosper. It was a long day's journey from Kythrœa to Larnaca (over 30 miles). The valley contains a succession of villages with very narrow streets, and the cylinders had many narrow escapes from being broken against the corners of the walls. The journey across the Messorea, or great plain, was diversified by a mule occasionally falling down or lying down to roll, or jumping across some little stream to the great danger of the hives. The end of one came out and so did the bees; but the muleteer had presence of mind enough to cover the opening at once with his coat.

Larnaca was reached between 8 and 9 at night, and bees were found safe. I had previously hired a house, which had a very large courtyard and verandah, formerly occupied by the Russian Consul; and here I transferred the bees and combs into bar-hives made by a native carpenter of much larger size than those I brought out. This, of course, was the work of some days, and when completed I proceeded on to Beyroot to get Syrian bees. On landing, my bees were at once seized by the customs authorities and declared contraband. For two days they kept them, and it was only when I had obtained the assistance of the English Consul and some other friends that they gave them up, and even then I had to pay 10 per cent. duty on them. This delay was fatal to getting bees at Beyroot, where my friends, Joseph Abdelnour Faker and Dr. Beshara I. Manasseh had kindly made inquiries (in the neighborhood and on Lebanon) among the native bee-keepers, and where I should have readily obtained any number of colonies, but, as the steamer that I was to return by came in on the third day, I had to go on board. Tripoli was the next port, and though I saw some bees, I could not deal.

At Scanderoon I had no trouble at all. Mr. Christian, of the Ottoman Bank at Beyroot, had furnished me with a letter of introduction to the agent at Scanderoon, and he very kindly sent me to a bee-keeper close by. The bees at Scanderoon are kept in wooden boxes about four feet long and nine inches square. The colonies were very strong, and I determined to take them home in the original cases. I decided to drive the bees to one end of the box and saw it in half. Getting a saw of the ship's carpenter, I returned and commenced work. This proceeding attracted many, curious to know what was going to be done. Seeing one hive cut in half was enough. The sawing, of course, greatly irritated the bees, and the crowd retired, many of them having their curiosity more than satisfied.

I was stopped at the Custom House, but my offer to open one of the cases to allow them to judge of the contents was politely declined, and I went on board. Whilst lying at anchor off Scandaroon, I gave my bees a flight on board, and no one got stung. This I did also at Alexandria, where we were delayed 16 days. The commander of the *Ararat*, Captain Sandrey, took much interest in the bees, and all along showed me the greatest kindness, giving me the offer of any part of the vessel in which to put the bees on the homeward voyage. I tried below deck first, and there unfortunately got a number stifled, owing to the rough weather causing the hatches to be battened down, and at same time I was much too ill *mal de mer* to go to their rescue. A call was made at Valencia, where another delay occurred through quarantine. I went into the country to observe the Spanish bees, but, with the exception that they appeared very black, they differed little from our English bees. After leaving Valencia, the sheep-pen on deck was used to shelter the hives in, and in this they safely arrived at Liverpool after a voyage of over 6 weeks, about 20 per cent., I believe, being lost on the voyage.

As I before remarked, the bees are kept in cylinders in Cyprus, in Syria in long boxes, also in water-jugs and baskets plastered with mud. The bee-keepers of the East are far more advanced than the old-fashioned English straw skeppists, for they never kill their bees. The lid at the large end of the cylinder is removed, the bees smoked to the other end, and about half the combs in the cylinder are cut away, the other half being left for the bees.

The cylinders are placed in huge piles, and the bees enter at small holes in the front, the entrances not being a foot apart. I think a point in favor of bee houses can be brought forward, or, rather, one of their supposed disadvantages rebutted. I bought between 50 and 60 lots, and in no case was a colony queenless. The great disadvantage of a bee house is supposed to arise from the queen mistaking the entrance. If the Eastern queens can find their entrances thus readily in a pile of fifty to a hundred hives, they must either have better discernment (a point in their favor) than English queens, or this objection to bee houses is unfounded. Such grand colonies of bees as those I got both in Cyprus and Syria I have rarely seen, and these, too, never having had attention in the way of feeding, but left just in a natural state. Though it was winter, almost all contained fine patches of brood.

The queens are very prolific, and the brood is raised in compact, solid masses, no patches of comb being left empty.

The bees are undoubtedly better workers, being much more active and stronger on the wing than our bees, though just a trifle smaller.

The small amount of drone-comb they build is another great point in their favor. (I believe that I can say that I have seen more drone-comb in 2 or 3 English hives than in the whole 50 or 60 I transferred). Their gnawing propensity, too, I imagine will be of value. The development of the jaws of the Eastern bees is curious, and has doubtless been brought about by the grape crops of the East. A bee-keeper at Scanderoon told me that great damage is done to the grapes by the bees, and that they get great quantities of honey or rather grape-juice from this source.

The great point against them is their irritability, and it is certainly a great drawback, and may prevent them from coming into general use. This irritability is far greater in the Syrians than in the Cyprians. An experienced bee-keeper would, of course, have no difficulty when once he knows the precautions it is necessary to take. If the quilts are removed very slowly, so that a great flood of light does not rush into the hive at once, the bars moved gently without jarring, and the bees not breathed upon, then all will be well—they will require no smoke and will be quite harmless; but a careless manipulator, not attending to these precautions, would probably irritate them, and their temper once roused is not easily soothed. Mr. Benton went through hive after hive in my presence without gloves or veil, and assured me that he did the same thing during the summer and did not get stung. I believe the evil reports have arisen through a lack of knowledge on the part of the owners of these bees, or on account of not getting the genuine article. When these bees are angry they appear to be cautious in stinging, but attempt to bite in preference.

Braula cæca is very abundant on the Eastern bees, but especially so on the Cyprians. Though I had but little experience with the bees of Palestine, I noticed a marked difference between this race and the Cyprians and Syrians. The Palestine bees are much more slender and downy, and deserve to be ranked as a distinct variety. The Cyprians and Syrians are, in my opinion, almost identical. They vary a little in color, the bees from the north of Cyprus being very dark.

Welwyn Herts, England.

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For the American Bee Journal.

Lime Packing for Winter.

J. C. OLDHAM.

Our Southern friends have quite the advantage of us, in that they need not bother much about the wintering of their bees; not so with us here in the North. I read the Weekly Bee Journal with much edification, and am greatly interested in what all contributors have to say about wintering bees—what absorbents are used; but never liked the idea of using chaff, straw, dry leaves, sawdust, etc., that were and are still so much advocated. Such absorbents retain all moisture, and therefore are as a wet blanket which is worse than none at all.

I use or have used only a quilt or carpet over my bees, until I first saw the lime project suggested, about Jan. 1, 1881, by some Kentucky gentleman, I believe. I had in the fall of 1880, 10 colonies in Langstroth hives in very good condition, but not as well prepared for winter as I desired—that is, more frames in the hives than were necessary. The cold weather set in so early and did not warm up again until spring. I liked the lime idea so well I thought I would experiment a little, and so put lime, partially slacked, in three hives; one I overheated and killed the bees, the other two came through in splendid condition.

I lost 5 of the 10 colonies I had in the fall; from those 5 during the summer of 1881, I took 400 lbs. of honey, mostly extracted, and increased to 12, the number I now have, except on the 8th inst., I had a swarm, making more than I really want or have time to attend, as I only keep bees for pleasure and recreation. Last winter I put lime in all my 12 colonies. They came through splendidly. No doubt they would at any rate, but I occasionally looked in the hives, and the combs were always nice and dry with not the least sign of frost. Lime is the least trouble of all absorbents to put in and take out again, much more convenient than the so-called absorbents.

Springfield, O.

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For the American Bee Journal.

An Open Letter to Mr. Doolittle.

DR. L. JAMES.

Dear Sir:—I have read with much satisfaction your late articles in the Bee Journal, giving your plan of securing such favorable results from your bees and the large yield of comb honey as reported in them. In addition to the information communicated in those articles, I should like to have one more, connected with them, that no doubt will interest many others as well as myself, and it is this: How do you manage to have so many hives open on each favorable day, so early in the season, interchanging the combs in the hives, and carrying others of brood around among your hives, to strengthen feeble colonies, without having a cloud of intruders from the other hives, ready to pitch into a hive as soon as it is opened, and thereby endangering its destruction, if it is a weak one?

I presume it is nothing uncommon with you, on opening a hive, to find it necessary to trim off some honey from certain combs to have them fit the place of those with which they are to be exchanged. And as the honey resources at this time are rather scant, the bees are upon the alert and will follow around, waiting to begin depredations on their neighbors as soon as the frames of comb are exposed.

I find my bees are so easily trained in this direction as to give me much trouble after a few hives have been attended to. If the hive is not too heavy, by carrying it into the bee house and attending to it there, this annoyance and risk can be avoided, but, as a general thing, my hives are too heavy for me to do so.

At your earliest convenience if you will give us your method by which you avoid this trouble you will much oblige many readers of the Bee Journal.

Atlanta, Ill.

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For the American Bee Journal.

The Standard Langstroth Hive.

G. M. ALVES.

Beginners frequently spend a good deal of their time in study as to the kind of hive they should use. As this is a matter of considerable importance, and one in which one's crude fancies often run into error, I propose here, for the sake of these beginners, to give what seems to me good and sufficient reasons why the standard Langstroth hive should be adopted. I wish to state here that I am not interested in the manufacture or sale of hives.

1. The Langstroth hive was the invention of a man who brought to his

task great interest, great experience, and a mind probably better fitted for his peculiar work than any of his successors. Hence, in using his hive, we trust to authority than which there is none better.

2. The Langstroth hive has steadily grown in popularity, and to-day is much more used than any other hive. We thus have the sanction of time and experience, which are of the greatest value in testing the usefulness of any invention.

3. The Langstroth hive and furniture being standard articles, may be more easily procured than any other. There are few supply dealers that do not keep in stock these hives.

4. The Langstroth hive and furniture being standard articles, may be procured at a less cost than any other.

5. Bees in Langstroth hives can be more readily sold, and at better prices, than if in odd frames.

Thus there are 5 good reasons that cover the whole ground why beginners would do best to adopt the Langstroth hive. The best authority, the test of time, the certainty of getting hives, etc., readily, the certainty of getting hives, etc., cheaply, and the certainty of having bees and brood in the most salable shape, should they afterwards wish to sell.

Henderson, Ky.

CONVENTION NOTES

N. W. Ill. and S. W. Wisconsin.

A special meeting of this Association was held at the apiary of Jonathan Stewart, in the village of Rock City, May 16. President R. M. Miliken being absent, the meeting was presided over by Vice President Levi Kiester.

After receiving and acting upon the report of the Treasurer, the Association proceeded to discuss a number of very important questions relating to bee-culture. The meeting was unusually interesting, and all the members present exhibited a deep interest in their work, and joined in the discussion of the questions before them with much ability and enthusiasm, and clearly showed careful study and close attention to progressive bee-culture.

The attention of the Association was called to several species of fraudulent practices by some unscrupulous apiarists, whereby an inferior quality of honey is imposed upon the public, and the following condemnatory resolution was passed:

Resolved, That we strongly protest against, and severely condemn, the nefarious practice of feeding bees glucose or grape sugar, or the adulteration of honey in any manner, as dishonorable and dishonest; that we pledge ourselves individually and collectively to expose any person or persons who, to our knowledge, may engage in such fraudulent practices; that no person so engaged shall be admitted to membership in this Association, and that it shall be deemed a sufficient cause for expulsion from membership.

The Association adjourned to meet again at Rockton, Winnebago Co., Ill., Sept 5, 1882.

JONATHAN STEWART, *Sec.*

☞ The Northwestern Wisconsin Bee-Keepers' Society will meet in La-Crosse, Wis., June 9, 1882, in the City Hall. A good attendance is desired, as arrangements have been made for articles from practical apiarists.

G. J. PAMMEL, *Sec.*

Local Convention Directory.

1882.	*Time and Place of Meeting.*
May 11	—Champlain Valley, at Middlebury, Vt. T. Brookins, Sec., East Shoreham, Vt.
16	—N. W. Ill. and S. W. Wis., at Rock City, Ill. Jonathan Stewart, Sec., Rock City, Ill.
25	—Iowa Central, at Winterset, Iowa. Henry Wallace, Sec.
June 3	—Hart County, Ky., at Woodsonville, Ky.
9	—N. W. Wisconsin, at LaCrosse, Wis. G. J. Pammel, Sec., LaCrosse, Wis,
Sept. 5	—N. W. Ill. and S. W. Wis., at Rockton, Ill. Jonathan Stewart, Sec.
Oct. 5	—Kentucky Union, at Shelbyville, Ky. G. W. Demaree, Sec., Christiansburg, Ky.
	Tuscarawas Valley, at Newcomerstown, O. J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

A Puzzle.—I have heard of persons running against a pozer, and it seems I have now encountered one, on which I want information. I introduced 6 queens last fall; of course they showed no progeny last fall. Two of the 6 showed their progeny in February, but none of the 4 have laid an egg yet. Of course they were dollar queens, but were well developed and as bright as a dollar. What is the matter?

COL. R. WALTON.

Industry, Ill.

[We could only guess at an answer, which would be as liable to be incorrect as otherwise.—ED.]

The Journal a Necessity.—I cannot do without the BEE JOURNAL, and if I continue to keep bees, you can depend on me as a life subscriber, at least while you keep so far in advance of all other bee periodicals. My bees are doing well thus far. Some are working in sections, but I have three different kinds of hives, and have to use various sized sections. If the bees pay well this year I shall endeavor to get a uniformity of hives.

HIRAM J. WARD.

Farmington, Kan., May 14, 1882.

Bees in Western New York.—My bees have wintered well on their summer stands packed in chaff, 42 colonies. I have not lost any. The spring weather has been very unfavorable for the bees, and cold winds have prevailed most of the time. The elm and soft maple blossoms have been killed by frost. The early sweet cherry and peach blossoms are opening now, and the dandelion will, in a few days, be at the hight of bloom. The orchards have never looked more promising than they do this year, and prospects are very good, if we only get suitable weather. The white clover prospects are not so good, for it has suffered with other grasses greatly from the many changes of weather last winter, with no snow on the ground. The reports from the surrounding country are that colonies have wintered well in cellars and on their summer stands, and are very strong in bees, and wherever there is any loss it is from starvation, and the bee-keeper is entirely to blame for it, for we had splendid weather in the latter part of February to look after the bees and feed them. By the way, I send you a little box with a plant in it. It grows here on the railroad track, and bees work freely on it. Can you give the name of it, and its value for the bees?

WM. BOLLING.

Dunkirk, N. Y., May 10, 1882.

[The plant is the corn gromwell (*Lithespennum arvense*), naturalized from Europe, and widely disseminated in the Northern States, especially occurring on sandy banks and roadsides. Its flowers are very small, but contain a considerable amount of nectar, easily accessible to bees. I should not suppose the quality very good, but have no certain knowledge about this.—L. J. BURRILL, Illinois Industrial Institute.]

Gone to Florida.—I brought here last month from Gretna, La., 5 colonies of bees, and did not lose a half pint in the removal. They are doing splendidly on the saw palmetto at present.

A. T. WILLIAMS.

Tampa, Fla., May 11, 1882.

Unfortunate.—I can sympathize with Mr. R. L. Shoemaker, of Newcomerstown, O., as stated in the last BEE JOURNAL. On April 25, in preparing cages for shipping queens, in drawing a fine tack with the point of a knife, the tack flew into my left eye and destroyed the sight, which has had the effect of subduing my ardor in the bee business somewhat. Weather here is cold and wet. No honey from fruit bloom—too cold and windy. Bees are starving to death; am feeding every colony in my apiary. Outside of the feed, I have given them, I do not think there is one pound of honey in my entire apiary, consisting of 35 colonies. What the future will bring forth remains to be seen. Prospect is far from flattering.

M. H. SNYDER.

Elmwood, Ill., May 12, 1882.

Entomological.—I send by mail a small box containing some wasps and small bees; also, some cocoons of larvæ. The wasps I have noticed for the past 3 or 4 years. I have destroyed many of them—over 200—since yesterday morning. Do you think it necessary? They are easily destroyed while about the hives. The small bees first made their appearance this spring. They seem intent on taking the pollen from the legs of the bees, alighting on their backs. I have seen them carried into the hives in this way. I dug the cocoons of larvæ from the ground where I saw ground bees last summer.

SOLOMON VROOMAN.
Seward, N. Y.

[The wasps are very common everywhere in the Northern United States. They are indeed the most common of our paper-making species. What house-keeper has not been annoyed by them in the autumn and spring, and what child has not been stung by them during the pop-gun period of its existence? They are insect-eating wasps, and so are really our friends. I have never heard of their eating bees, nor do I think they do. I should never kill them. I have seen them destroy the common and very destructive currant slugs in the summer *in extenso.*

The little wild bees are sometimes annoying in the spring, and doubtless take some considerable honey. They do not try to enter the hives after the honey season commences, so far as I have observed. Those who have the Syrian bees will not be troubled much by these wild bees, or any other robbers. The Syrians seem to say practically, to all intruders, "We run this hive." There are two or three species of the bees, sent by Mr. V., all of which are common. They visit the bees and the hives for the honey and the pollen.—A. J. COOK.]

White Clover Prospect Good.—I wintered my 20 colonies on their summer stands as usual, in which manner I have never lost a colony. I commenced the bee business in 1877, have always used the movable frame hive, and have never lost a swarm yet. My bees are now in splendid condition, and only one has a faulty queen. The Syrian queen I wrote of in the BEE JOURNAL, page 374, 1881, and thought was lost, I found in February last when I examined my bees. She was in hive No. 13, about 60 feet distant. The former queen in No. 13 was a weak Italian, and worthless. I thought she might live till spring. I was glad to find her superseded. Bees have bred up very rapidly, the hives being full of brood, and drones flying when it is warm enough. To day the weather is 46°, and a drizzling rain. If it keeps on this kind of weather many more days I fear the bees will run short of honey. The prospects for white clover is good.

R. M. OSBORN.
Kane, Ill., May 12, 1882.

A "Played-Out" Queen.—I send you by this mail a queen that I have had nearly two years. She has always been a good, fertile queen until about 3 weeks ago, when she commenced laying drone eggs. She would deposit but one egg in a place, in worker cells, but they all hatch out drones. I put on a feeder and fed them; also gave them brood from other colonies, but to no avail. I send her to you to dissect. How do you account for it? She has always been a good layer. My bees were never in better condition at this time of the year than at present, although we have had a very cold, backward spring.

L. E. WELCH.
Linden, Mich.

[The queen is undoubtedly old and superannuated, and has become a drone layer. Probably had you given another frame of brood, during a honey flow from fruit, the bees would have reared a young queen, and superseded this one. We have not the necessary time and facilities for scientifically dissecting queens or bees. —ED.]

Intruders.—Yesterday the bees flew out of one colony much excited, and settled back on the front of the hive. On examining them I found about 3 pints of dead bees, about half inside of the hive and the rest around in front of it. I could not see what caused it. There were a few moths enclosed in their cocoons, not much honey, and plenty of room and bees. When I opened the hive I saw a black bug in the super carrying a dead bee, but would have thought nothing of that under other circumstances, and do not think it caused the trouble. The bug was about as large as a queen bee; head half as large, abdomen a little larger and flat. Tell me what caused my bees to fight and kill each other?

JOHN WATSON, JR.
Danville, Ill., May 15, 1882.

[We think a natural or abnormal swarm attempted to invade the hive, and was repelled by the bees belonging there. It may be, however, robbers caused the disturbance, but they would hardly have settled on the front.—ED.]

Extracted Honey.—We have had many excellent articles on running an apiary for comb honey, by Messrs. Doolittle, Heddon and others, in which all the details of the business have been very carefully and elaborately described. These chapters have been very useful and entertaining; but very little, comparatively, is written on the management of an apiary run exclusively for extracted honey. It would doubtless prove an interesting variety to the readers of the BEE JOURNAL to have a few chapters on running an apiary exclusively for extracting, with all the minutiæ that has been used in describing the best practices for securing comb honey. The best frame and hive to use where extracting is the leading feature of the apiary—in a word, all the *modus operandi.* A few papers on this branch of apiculture would prove a pleasant variety with the comb honey practices, and hair splitting theories, which the readers of bee literature have been so indulged with.

Highlands, N. C. E. E. EWING.

Various Matters.—I would like to ask a few questions: 1. How can I keep the queen out of the section? Mine are coming up in the sections—a few, at least, on nearly all the hives. I give them ¼ inch between the sections and brood frames. Found a few sections half full of drone brood. 2. How long can bees, after swarming, live without food? One week ago was nice, and I had several swarms come out; they were hived on foundation, and since then it has been cold, cloudy, and raining so they could not go in search of food. I got uneasy yesterday and went to feeding. 3. When two swarms are hived together, will they usually stay; 4. and would it be best to put on sections on such hives at once? I have two such that fill the lower story of the Langstroth hive altogether too full of bees. We have had a week of remarkable weather for May; people were wearing overcoats all the week.

D. W. BELLEMEY.
Vienna, Ill., May 14, 1882.

[1. Extract all the honey from the brood chamber, and use only worker foundation in the boxes.

2. They should be fed within 24 hours after swarming, if weather is unfavorable for gathering honey.

3. Yes, if one queen is removed.

4. No, not until the foundation is well drawn out below.—ED.]

Convention at Grand Rapids, Mich.—What became of the Bee Convention to be held at Grand Rapids April 26, 27? I was there but could not find any meeting of bee-keepers; neither have I seen any report of it published.

B. DICKINSON.

[We do not know; perhaps the Secretary, Mr. W. M. S. Dodge, Coopersville, Mich., can give some satisfactory explanation. It was to have been held in Supervisors' Hall.—ED.]

Bad on the Pets.—We lost near all the apple and peach bloom by the blizzard; now we lose nearly all the locust and poplar or tulip by the continual rains of the past 10 or 12 days, bees hardly gathering enough for brood-rearing. To-night is almost cold enough for frost. If it was not for the cheering news brought by the BEE JOURNAL, I would feel very despondent; indeed, I have divided several colonies which were making preparations for swarming, and had one large swarm from a box hive which I bought from a neighbor. A great many of my neighbors' swarms are leaving them this season. I live in hopes for the white clover.

G. W. ASHBY.
Valley Station, Ky., May 12, 1882.

Floating Apiaries.—Please state in the BEE JOURNAL whether there is any man or company of men who have steamboats loaded with colonies of bees, and advance up the river as the weather gets warmer; if so, please give particulars.

WM. SEARS.
Harrodsburg, Ind.

[Not that we are aware of; several have tried it, chief among whom was Mr. C. O. Perrine, of this city; but we believe the experiment has met with disappointment and loss in each instance.—ED.]

Milkweed.—I mail you a few bees that were handed me by a party who lives some 12 miles south of this. By examining, you will see the bees are in such condition they cannot use their feet, from the particles adhering to them; they cannot crawl in the gum. He says at the entrance of one old box hive there were about a quart of bees dead, all with these particles attached to their feet. I had a swarm of bees to-day that I obtained, to my certain knowledge, 4 queens from. I caught one as she came from the hive, which I caged, then moved the old hive and put a new one on the old stand laying the queen caged at the entrance, supposing they would come back. They went off 50 steps and settled. I took the caged queen and hive to where they settled; shook them off with the queen still caged. They commenced going in, when I discovered another queen; caught and caged her; took the first queen and put her in the hive she came out of, turned her loose in the old hive, and moved it back to its former place; went to the swarm, found them settling, where first settled; shook them off, and waited to see if they were going in, when I discovered queen No. 3. Caught and caged her, put No. 2 inside of the hive in the cage on a frame, and was watching to see if they were going in, when I discovered queen No. 4. Being out of cages, I gave her to my wife to hold, who, being timid, let her get away. She flew in the air. Whether I caught this one again I cannot say, but I got 4 queens that I know.

McKinney, Texas. SUBSCRIBER.

[In most of the United States there is a species of milkweed (*Asclepias*), the sap or juice of which adheres to the feet and legs of the bees, and not only causes them much trouble to walk, but is very distasteful to those in the hive. It is not an unusual occurrence for the hive bees to kill great numbers of them. Perhaps this milkweed grows in your neighborhood, or some other plant of a like nature, the pollen or sap of which is the cause of the trouble.—ED.]

Snow and Frost.—This morning the mercury stood at freezing, and the ground was frozen. Yesterday we had a snow storm, and the snow has not all disappeared yet. Several days past have been quite cold, but to-day is pleasant.

GEO. H. GOODWIN.
West Milton, N. H., May 17, 1882.

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BEE JOURNAL
ESTABLISHED IN 1861

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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

◆

☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 22, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 7c. for dark and 9c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax, on arrival; 18@22c. for medium grade, and 15@17c, for dark.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand for extracted honey, in the retail way, is fair, and our sales for manufacturing purposes were very good of late. We pay 7@9c. on arrival. Prices for comb honey nominal and demand slow.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for honey is light, most of the trade finding fault with the best offered, as it is more or less candied. Values are not steady, prices being made to meet the views of the purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—There are a good many small lots of very nice white section honey coming in now from time to time. White sells readily at 22c.; second quality 18@20c. Buckwheat, no sale at any price. Extracted, none in market.

BEESWAX—25@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—Little if anything doing in honey, and prices are entirely nominal. White clover, fancy, 1 lb. bxs., 15@16c.; white clover, good to choice, 1@2 lb. bxs., 13@14c; buckwheat, 2 lbs., per lb., 11@12c. Extracted and strained, white, 9@10c.; dark 7@8c.

BEESWAX—There is only a moderate supply of beeswax, and with a fair inquiry prices are firmly sustained. Western, pure, 24@25c.; Southern pure, 23@24c.

D. W. QUINBY, 105 Park Place

ST. LOUIS.

HONEY—In fair demand. Strained selling at 8@10c.; comb scarce—nominal at 18@22c.

BEESWAX—Stiff at 21@22c. for prime.

R. C. GREER & CO., 117 N. Main Street.

SAN FRANCISCO.

HONEY—Stocks are not heavy, but are larger than holders care to have them. Offerings are almost entirely second grade to inferior. There is a general desire to clean up prior to arrival of new crop.

We quote white comb, 13@14c.; dark to good, 8@11c. Extracted, choice to extra white, 7@7½c.; dark and candied, 6@6¼c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

☞ We learn, with much regret, that Mr. James Vick, of Rochester, N. Y., died of pneumonia on the 9th inst. Mr. Vick was a prominent and popular seedsman, and editor and publisher of a "Monthly" which was the admiration of every lover of the beautiful in nature. He was a thoroughly progressive and practical man, and one well-known throughout the World.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

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We supply the Weekly **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 60
Bee-Keepers' Instructor (W.Thomas)	2 50..	2 35
The 4 above-named papers	4 50..	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 7 above-named papers	6 30..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

☞ We have on our desk Circulars and Price Lists of bees and apiarian supplies from G. J. Pammel, La Crosse, Wis., L. E. Mercer, Lennox, Iowa, and W. G. Russell, Millbrook, Ontario, Canada.

◆

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

☞ This one fact is being brought before the minds of the people of the United States: Kendall's Spavin Cure is not excelled as a liniment. 18w4t

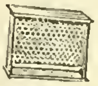
Bingham's Smoker Corner.

Bayou Goula, La., May 2, 1882.

Messrs. BINGHAM & HETHERINGTON, Abronia, Mich.

Dear Sirs: The Conqueror conquers everything in the apiary. It is almost a fight between my three assistants, as to who will get it first in the morning. A single puff from it will fill a double story with smoke. I will use no other after this.

Yours truly, P. L. VIALLON.



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I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including the CONQUEROR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

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☞ $20.00 for the round trip of over 2,000 miles.
☞ Special trains on the G. T. R. R., and special steamers on the St. Lawrence River,
☞ Each tour personally conducted by W. H. BREARLEY, of the DETROIT EVENING NEWS.
☞ All tickets good to September 3d.
☞ Send 3-cent stamp for circular.
☞ A superb new Illustrated Guide Book, with descriptions and information, over 40 maps engraved especially for this edition, and a perfect copy of an oil painting, in 16 colors, of Glen Ellis Falls (near Glen House) for the first page of cover, will be sent to any address for 30 cents. Address—
W. H. BREARLEY, Office Detroit Evening News.

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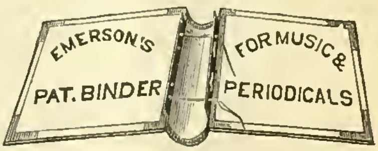

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For Bee Journal of 1881..................85c.
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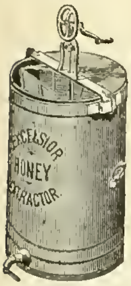

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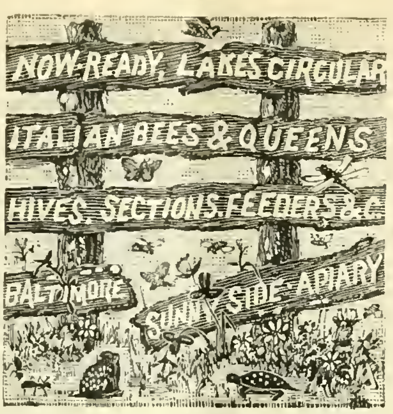

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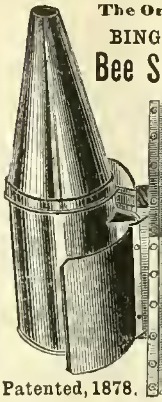

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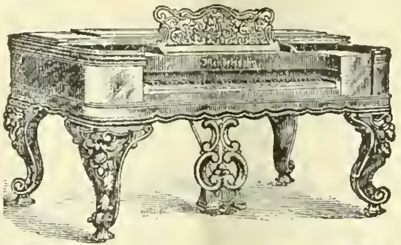

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THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.......... 337
Ornamentation of School Grounds.......... 337
Scarcity of Beeswax.......... 337
Another case of "Glucose Meal".......... 338
Honey versus Glucose.......... 338

Among Our Exchanges—

Bees Wintered in a Greenhouse.......... 339
Bees Resenting an Insult.......... 339
Artificial Comb Honey.......... 339
Oleomargarine.......... 339
Madeira Wine from Honey.......... 339
For Ornament and Honey.......... 339
Winter Ventilation.......... 340
Behind the Times.......... 340
Bee Management.......... 340
Curious Statistics.......... 340

Correspondence—

Rearing Good Queens.......... 341
The Glucose-Honey Question.......... 341
Bee Stings—Blacks vs. Italians.......... 342
The Song of the Bee.......... 343
Mr. Heddon's Reply.......... 343
Mating of Queens.......... 343
About "Dollar" Queens.......... 343
A Review of the Past.......... 344
Poor Queen, No Colony.......... 345
Those Unkind Things.......... 345

Convention Notes—

Western Michigan.......... 346
Planting for Honey.......... 346

Selections from Our Letter Box—

Early Queen-Rearing.......... 347
Parthenogenesis.......... 347
Pollen Not Detrimental.......... 347
Fastening Foundation in Sections.......... 347
Cold in Georgia.......... 347
The Worst has Come.......... 348
Various Methods.......... 348
Poorest for Thirty Years.......... 348
Cold in New York.......... 348
Bees in Alabama.......... 348
Tilia Americana in London.......... 348
Death of M. Parse.......... 348
A Swarm in New Jersey.......... 348
The Weather in Scotland.......... 348
More Encouraged.......... 348
Destroying Drones.......... 348

Ornamentation of School Grounds.

We notice the evident tendency of the times to tastefully plant flowering plants and trees on the grounds of the school-houses. This has been too long neglected, but we hope it will now become the rule instead of the exception. This will, in a measure, educate the coming generation to beautify their surroundings, to plant trees for shade, flowers for beauty and shrubs for ornament. This will help the bees some, paying back cultivated bloom for the ruthless destruction of our forests, and the loss of the wild flora, which by civilization has been entirely destroyed. The *Farmers' Review* remarks as follows on the subject:

> The ornamentation of school-house grounds by means of the tasteful planting of flowering plants and trees, is a long step towards the much wished for time when the rudiments of agriculture will be taught the children who are to become the intelligent agriculturists of the future. The practice also helps to develop a refined taste, a love of the order and beauty of nature, and gives a glimpse of what farm life may be. The Michigan Horticultural Society was the first to lead off in this good work, and its efforts were crowned with notable success. It is hoped that others will follow in the same direction, as the Western New York Horticultural Society has already done.
>
> It is pleasant to note praiseworthy emulation and rivalry of the great seedsmen in works of public utility, even if their efforts are profitable advertisements, as they deserve to be. Messrs. D. M. Ferry & Co., for several years have been supplementing the work of the Michigan Horticultural Society, in ornamenting the school grounds of that state. Now Mr. James Vick makes the liberal offer to send free, a collection of 12 varieties of seeds "to five districts in each county in every State that shall first apply for them," for cultivation in the school grounds. And Mr. Hiram Sibley has sent $5,000 worth of seeds to the sufferers from the Mississippi floods. This is a way of "casting bread upon the waters," that is sure to return a many-fold recompense.

◆

Scarcity of Beeswax.—The *Juvenile Gleanings*, which has doubled its size for May, says on the beeswax question: "There is now a prospect before us that the wax of the world will not nearly supply the demand for foundation....I should not be surprised if foundation should be up 10 cents per pound before the 1st of June. Of course no one can hold to present prices, unless they can get wax."

◆

☞ The Caledonian Apiarian Society will hold its "ninth grand show of bees, hives and honey," at Glasgow, Scotland, July 24-27, 1882. Cash Premiums, Silver and Bronze Medals and Diplomas will be awarded. We can send an entry blank to any one wishing to send apiarian exhibits. Foreign exhibits are entered free. Mr. R. J. Bennett, Glasgow, is the Secretary.

◆

☞ The late Mr. James Vick, of Rochester, N. Y., whose sudden death we noticed on page 333 of last week, was an Englishman and a playmate of Charles Dickens, and had also been a fellow typo of Horace Greeley, on the *Knickerbocker*. During the grasshopper troubles in Kansas he sent the sufferers $20,000 worth of seed and $10,000 to the Michigan sufferers.

◆

☞ The bee, although somewhat of a rover, thinks its first duty is *to hum*.

Another Case of "Glucose Meal."

From the Elgin, Ill., *Advocate* of May 6th, we clip this extract, giving another instance of injury and loss resulting from feeding the refuse of glucose factories to cows kept for dairying purposes:

> This week Henry Waterman, who operates a creamery at Bartlett, and who is well known on the Board of Trade—informed us that he had recently sustained quite a loss on cheese, and was unable to account for it until he received the following letter from Charles D. Wells, of Chicago, who handled his cheese. Mr. Wells says: "Your cheese have arrived, and, on examination, I find they are such a poor lot as to be almost unsalable. They have the appearance of being finely made, but on inserting the tryer in the cheese, the plug comes out porous and gritty, and on holding them any length of time seem to rot and get bad. There is something in the milk, in my judgment, that causes these conditions. The cows are fed on something that is sweet, or foreign to their customary feed. The cheese seem precisely like a certain factory, the cheese of which I handled last year, which rotted down in thirty days, causing a loss to me after I had sold them. Some of my customers refused to pay at all. After investigation I found that the cows had been fed on glucose, which invariably produces this kind of cheese." Mr. Waterman, upon receipt of this letter, made investigation, and learned that a number of his patrons had been feeding glucose meal for the past few months. Factorymen of this section should stipulate with their patrons not to feed this meal, as it invariably results in a great loss. In Ohio, where glucose factories are quite numerous, the cheese factorymen receive the milk from cows fed on glucose meal, or refuse, and their example should be followed here. It is not fit for cows, and spoils the milk for food, butter or cheese.

"Rotted down in thirty days!" and yet the philanthropic manufacturers of glucose claim to be the especial benefactors of the farmers and dairymen, because they stimulate the market for corn, and afford a cheap feed for dairy cows; so, too, should they claim to be humanitarians, because of the employment they give the doctors, and for their premature contributions to the undertakers. Prof. Nichols, in his able article published by us last week, says glucose "is not a poison when well made, and, as regards its healthfulness, it may not be much more deleterious than ordinary cane sugar; still, it *does* produce and aggravate dyspeptic symptoms, and by its proneness to set up fermentative processes, its use causes flatulency and painful affections of the bowels."

But with an unscrupulous class of manufacturers whose association holds its sessions with closed doors, and whose commodity is used mostly for fraudulent purposes, what likelihood exists that their wretched stuff is even "well made," or that they are any more honest than they expect their patrons to be? And even when well made, Professor Nichols says it produces the grievous complaints enumerated above. When cheese will "rot down in thirty days," caused by the infusion of the glucose poison into only a portion of the milk used in its manufacture, can it be wondered at that the horrid stuff soon rots the very timbers in the railway car which transports the meal, and that railroad managers issue orders to thoroughly scrub the car as soon as emptied?

If glucosed cheese will "rot down in thirty days," what must be the effect of glucose on the urinary organs and lacteal secretions of humanity? Can it be doubted that the effect is even more pernicious on the blood, lungs and heart, than on the bowels? One-half the evils resulting from the use of glucose have never been enumerated. As remarked by Dr. Kellogg, of Michigan, it enters into many complications which develop into well defined complaints, and are frequently attributed to other causes. We doubt not many chronic complaints, which have been fearfully on the increase of late, can be indirectly traced to glucose; and posterity will more largely pay the penalty. The *stuff* should be manufactured and sold under penalties and restrictions only, as is corn whisky and other poisons. The evils attending its manufacture and sale more than overbalance the good, and, therefore, it is a curse. The National Board of Health has a great work before it—but one which it must undertake, and the sooner they realize its magnitude, the easier will be the struggle. Meantime, let all honest producers, whether of honey, butter or cheese, or anything else of food, lend their influence against adulterations wherever found.

☞ During almost all of last week the weather was quite unfavorable in nearly all the Central and Northern States for building up weak colonies. Queen-breeders have also been much embarrassed, the weather being too variable for developing good queens.

Honey versus Glucose.

Mr. M. C. Stevens, Lafayette, Ind., sends the following semi-critical article. The expression to which he takes exception is an old aphorism, and was given as such. We do not know any who have been so foolish as to claim the same sweetening properties for honey that cane sugar possesses, though to the taste, honey is quite its equal, and glucose is not. That honey may have been considered a luxury in former times, there is no doubt; so, too, were butter, cheese, and, in remote times, wheat flour, but are they fairly so considered now? Honey is just as surely working its way into public favor, and it remains only for the combined wisdom of the bee-keepers to make it an equal necessity with consumers:

> In your article in the JOURNAL for February 1, on "Methods for Granulating Glucose" you close with these words: "And finally, when our cane sweets shall have been exiled from our markets, the enterprising bee-keeper will have a market at his door for what (honey) he can spare from the neighborhood demand, because there will still be consumers in abundance for natural sweets—and what can be sweeter than honey?"
>
> This question was propounded many years ago and ought to be a strong argument that honey is the sweetest substance known. It might have been so in Samson's day, but I think if you sweeten your cup of coffee with the same weight of honey as you do of cane sugar, you will discover a great difference in the taste. If I am not mistaken, there is not much more sweetening property to honey than there is in grape sugar or glucose. In fact, according to the most careful analysis, about 73 per cent. of honey is glucose, or, speaking more accurately, a mixture of lævo-glucose and dextro-glucose, (36.45 per cent. of the former and 36.57 per cent. of the latter). Of the remaining 27 per cent. 18.5 per cent. is water. According to my information, it takes two and a half pounds of glucose to be equivalent to one pound of cane sugar in sweetening effect; and I am quite sure there is no more sweet, if as much, in honey as in glucose.
>
> While I am a bee-keeper, and am a believer in honey, and have no patience with adulterations of any kind, and think they should be stamped out by appropriate legislation, still I think the consumers of it should understand that it is a luxury, and they should not be kept in ignorance of this fact. To sell a pound of honey to a man for twenty cents, and at the same time make him think he is getting the worth of his money in sweetening value as compared with cane sugar at ten cents a pound, is just as truly a swindle as to sell glucose for cane sugar. Let us not, in trying to steer clear of Scylla run upon Charybdis.

I will say in conclusion that I have never yet bought a pound of glucose, except I have done it in buying adulterated cane sugar, or in adulterated syrup, purporting to be pure sugar, home drip, or some such name. Let us continue to make every effort to have the bees put up their honey in an attractive form, seeing to it that they have ample pasturage of white and red clover to work upon as a main reliance, and that every thing about the apiary is kept neat and clean, and that the honey is taken off before the bees soil it by crawling over it with their dirty feet, and my word for it, there will be a demand for all the honey we can get at remunerative prices, although it is clearly understood that it is an article of luxury.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Bees Wintered in a Greenhouse.—Mr. A. Pettigrew, in the London *Horticultural Journal*, remarks as follows:

Can bees be wintered in a greenhouse with the doors of their hives open? Yes; we have kept weak colonies in a greenhouse during the winter and spring months. Many American apiarists winter their colonies in dark cellars, but there the bees have no light and never leave their hives to fly about. At Sale I placed colonies in a greenhouse with a span-roof, 60 feet long and 12 feet wide, and there let them fly as much as they liked. On the first day or two of their confinement, many of the bees flew against the glass and became bewildered, and some were lost. The bees that flew against the glass became fatigued and rested on the sill of the greenhouse. Many of the bees on the sills gathered together in clusters, when they were carefully picked or swept up and carried to their hives. In a few days the bees became accustomed to their confinement, and flew backwards and forwards in the greenhouse without attempting to fly against the glass. In placing bees under glass a little care and attention are necessary for a few days. By placing a dish of broken honeycomb near the doors of the hives the bees smelt the honey on coming out, and many of them commenced to carry it into their hives. By removing the honey to a greater distance the bees soon become acquainted with their new home and its immediate surroundings. When bees are in a greenhouse they seldom leave their hives till the thermometer rises to about 50°. When the mercury ranges between 50° and 60° the bees find every flower, and delight to work upon Chinese primroses. The gardener at Worsley Hall 10 or 15 years ago placed a colony every season in his early peach house, and valued the services of the bees there very much, for they never failed to set a good crop of fruit.

* * *

Bees Resenting an Insult.—A correspondent of the *Courier*, Boulder, Colorado, remarks thus on the subject:

Bees by nature possess the acute temperament and sensitive nerve work of the higher order of creation. So susceptible are they that the presence of a stranger is at once understood by them, and don't you forget for a moment that there are thousands of tiny eyes watching for the first break of hostilities. The native or black bee is more aggressive than the Italian, but the latter, when the warwhoop is raised among them and fully aroused, are hard to subdue, and they never forget the intruder who has grossly insulted them. Instances are known where one member of a family where bees are kept has been a perpetual target for their darts on account of some misunderstanding, and the other members were allowed the freedom of the apiary unmolested. Bees think a great deal of their liberty, and cannot be forced. They must be handled with tact and average intelligence, so as not to interfere with their business, for, when angered, they are as persistent in revenge, as when distilling the rarest bloom.

* * *

Artificial Comb Honey.—Speaking of this foolish but oft-repeated story concerning artificial comb made of paraffine and filled with glucose, the *California Apiculturist* says:

"Never can human ingenuity fix up honey in such shape that it will closely or otherwise resemble the product of the honey bee. Why, the presumption is preposterous, and we shall dismiss the subject with all the contempt imaginable for the originator of the hoax, who has been seeking to injure the bee-keeping industry."

* * *

Oleomargarine.—The *Planters' Journal* makes the following observations:

The fight made in St. Louis by the regular butter dealers against the oleomargarine venders is waxing warm. A private detective of ex-Chief-of-Police McDonough's agency, has been investigating the manufacture of butter sold in that city, and, according to a report made by him, a good deal of the butter consumed in St. Louis is made from the carcasses of dead animals picked up off the streets by the dead animal contractor. According to his story, dead animals are bought in East St. Louis of the dead animal contractor; they are cut up, the fat separated, cleansed by a chemical process, the oleomargarine extracted, colored, packed, and sent to some point down the river. There it is marked "Goshen butter," and shipped back to St. Louis dealers. The detective bought a firkin of this "Goshen butter" from the manufacturer, and under Governor Johnson's instruction carried it to a chemist, and the analysis shows conclusively that the alleged butter is made from animal fat. The sale or manufacture of oleomargarine is prohibited by the laws of this State but no arrests have been made.

* * *

Madeira Wine from Honey.—The following process is translated by New Remedies from the Pharm. Handelsblatt, and is given by a renovated authority on bee-culture, who pronounces the product as exactly similar to Madeira, and to be a royal beverage:

Mix 25 pounds of honey in a bright copper boiler, with 50 quarts of soft water, boil gently and skim. After half an hour add gradually 3 pounds of finely powdered chalk, under constant stirring. A tough mass will rise to the top, which is to be skimmed off, and when no more of it makes its appearance, the liquid is poured into a wooden vessel, where it is allowed to cool and settle. The liquid is then poured off from the sediment (chalk), transferred to the boiler, mixed with 6 pounds of finely-powdered, well-burnt charcoal, and boiled gently for 2 hours. It is then transferred again to the wooden vessel (which has been cleaned) allowed to cool, and filtered through a bag of felt or flannel. The liquid is again put into the boiler and heated to boiling. The white of 25 eggs having been beaten to a foam with water, is now gradually added. The coagulation of the albumen envelopes the residuary fine particles of coal and other impurities which rise to the top, whence it is skimmed off. The chalk removes the acidity and the charcoal destroyes the waxy taste. After the albumen has been removed, the liquid is kept gently boiling for a short time, then allowed to cool, and poured into a small cask, which must be filled so that a small empty space remains below the bunghole. This is covered with a piece of clean linen nad the cask left to itself until fermentation has set in. The liquid is then clarified in the cask in the usual manner, and filled in bottles. It keeps well for over 50 years. The cellar should be cool, having a temperature of 39 to 40 degrees F., and the bottles should be kept buried in moist sand.—*Scientific News.*

* * *

For Ornament and Honey.—The *Rural New Yorker* observes as follows:

There are some apiarists who, in setting out plants for bee pasturage, would like something ornamental as well as useful. This they will find in the Cordate Bocconia (*B. Cordata*) a hardy species from China, bearing large panicles of small, white or pale rose-colored flowers. Two other species, B. Japonica and B. Phacelia, are also good honey plants.

Winter Ventilation.—Herr Hilbert, at the Austro-German Congress, proposed to discuss the following question: "Is the normal wintering of bees viewed from the present standpoint of Apistic Science still worthy the name of a masterpiece on the part of the bee-culturist, and what points are necessary to successsful wintering?" He gave his views in about the following language:

Thus far wintering has always been considered a sort of a masterpiece on the part of the bee-culturist. This very important question has already been sharply discussed and explained. The present treatment of it is to embrace only the strictly practical part of the question, and divide it into two portions: the preparation for wintering and the wintering itself. The preparation necessary to success in wintering must embrace attention to the following seven points: Construction of the hive; strength of the colony, with age of the bees; age and vigor of the queen; peculiarities of the race; quantity and quality of the stores for food; the proper completion of the preparation for winter at the right time, and, lastly, the location of the hives.

That a great deal depends upon the proper construction of the hive, every one will certainly admit. We have a great variety of quite suitable bee-hives, yet not every form is adapted to each locality and each climate. A hive is good to winter in when the brood chamber (the proper winter nest of the bees) retains the heat well, so that no frost can accumulate on the inner surface or on the combs. Second, the winter nest must be roomy enough so that it can accommodate sufficient winter stores and so constructed that the bees can easily reach these stores. How many colonies starve with full combs? I put little stress upon the position of the entrance; my preference, however, is for a hive which has an entrance at the bottom and also one above the middle of the brood room, that is, the winter nest. Suitable ventilation is an important consideration. In this direction Baron Berlepsch has caused much misfortune; he attached not the least importance to ventilation, indeed he even advised the careful filling up of every little crevice. Since I have arranged for proper ventilation I winter with scarcely any loss.

Only colonies with a large proportion of young bees are to be wintered. No race contracts its brood-space as early as does the Italian. We must therefore look to hybridizing. In order to obtain young bees, liberal speculative feeding is to be recommended for the autumn. Old queens always limit their laying earlier than young ones. The removal, then, of all old and failing queens must be attended to. Now we come to the quantity and quality of honey. If possible, no colony is to be put up for winter with less than 20 pounds of honey. A colony would indeed come through the winter with 15 pounds, but since the spring weather cannot be foretold, it is always better to supply pounds. Unsealed honey is to be avoided as much as possible, likewise one should guard against old, crystallized honey; rape honey, especially, has a disposition to crystallize quickly. If such honey be found it is best to take it out, melt it up, and feed it back, yet this proceeding must take place early enough to give the bees time to seal over the honey.

As the last point to consider: the location of the hives. In order to keep the bees in their winter rest, all disturbing influences, as drafts of air, very warm sunshine, birds, mice, the rattle of wagons, and all other noises, should be kept from them. Besides, the bee-keeper must not disturb the bees for the purpose of finding out what his pets are doing. A light, continued buzzing betokens that everything is right, a sharp tone indicates a lack of warmth, discontent, too great warmth, need of air or water, while a moaning sound tells of queenlessness.

He who carefully observes all the stated points will winter his bees well. This much is settled; the whole of wintering is no master-piece.

◆

Behind the Times.—The *Home and Science Gossip* says:

Keeping bees in the old box hive is entirely out of date, and the sooner it is abandoned the better. The difficulty with it is that you cannot regulate the internal economy of a colony, but must leave the bees to do pretty much as they please. Bees need management, the same as cattle, poultry, sheep, hogs, or any other kind of farm stock.

◆

Bee Management.—The *Indiana Farmer* gives the following as its views on this subject:

While it is true, careful management will cure nearly all cross bees, it is also a fact that careless handling will make the most gentle colony vicious and cross. It is a part of the nature of bees to gorge themselves with honey when alarmed, and while in this condition they rarely sting without some great aggravation. During the honey harvest the bees are more or less filled with honey all the time, consequently they are less liable to sting at this season of the year. We seldom use smoke on the bees without first testing their temper, by raising one corner of the cloth covering the frames. We may go through the entire apiary examining every colony without having to resort to the use of smoke. Still, it is best to have the smoker going and setting handy, so as to have it, should the occasion occur for its use by the dropping of a frame or the mashing of bees by careless handling of them.

With the use of the many improvements in bee-keeping in both knowledge and implements, the success of the bee-keeper to-day depends alone on that over which he has no control, viz., atmospheric conditions. With our knowledge of their wants and nature, assisted by the movable frames, we are able to build them up into strong colonies. With the use of foundation, we can give them material for combs, without taking the time, or stores gathered for its construction. With the use of the extractor we can empty their combs without damage, to be replaced and refilled. And we believe, by judicious planting, we will soon be able to produce a flora which will not entirely fail, let the weather, atmospheric conditions, be what they may.

◆

Curious Statistics. — The *Boston Commercial Bulletin* gives the following:

There are few persons who have any idea of the immense agricultural and horticultural services rendered by bees; but a calculation just made by Rev. M. Sauppe, a great bee master, of Zuckendorf, Saxony, goes far to prove the utility and importance of bee-culture. His calculation is that, out of each of the 17,000 hives to be met in Saxony, 10,000 bees fly per day—equal to 170,000,000—each bee four times, equal to 680,000,000 of flights, or in 100 days equal to 68,000,000,000. Each bee before flying homewards visits 50 flowers, therefore the whole assemblage has visited no less than 3,400,000,000,000 of flowers. If out of ten only one flower has become fertilized, 340,000,000,000 of fertilized flowers would be the result. Supposing the value of the fertilization of 5,000 flowers to be only a German pfennig (one-tenth of a penny), the united bees of Saxony have earned, per annum, the sum of 68,000,000 pfennigs—680,000 marks, or about $170,000. Thus each hive is calculated to do a national service to the value of $10 per annum, and this they do while paying more than the expenses of their keeping by the honey they gather. Upon these figures M. Sauppe recommends that more bees should be reared and kept in Saxony, but his recommendation will do for this country as well.

◆

☞ The Chinaman's version of "how doth the little busy bee improve each shining hour," is amusing. His teacher in the mission school gave him for his lesson that verse, repeated it to him, and he promised to remember it until the next Sabbath. When he came again, in response to her request, he rendered it in this wise:

"How see him beley [very] small sting bug
Go hunty sweet sting bug juice,
Sixty minutes all the day, all kinds places,
Lound [around] flowers just got busted."

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

CORRESPONDENCE.

For the American Bee Journal.

Rearing Good Queens.

E. A. THOMAS.

Probably there is no more important subject pertaining to bee-culture than this, as the prosperity and strength of a colony depends entirely upon its queen; if she be deficient in any respect, the colony must suffer in consequence; if she be strong, vigorous, and in every way desirable, the colony will prove valuable, withstanding our most severe winters and producing large crops of the sweet nectar. The queen, being the parent of the entire colony, must represent all the characteristics present in any strain; therefore we must realize the necessity of a scientific investigation of certain laws which regulate the propagation of the species, and the methods by which the finest and most perfect queens may be reared. A discussion of the laws which guides the scientific breeder in developing the most desirable qualities in a strain of bees will hardly be interesting to the large mass of bee-keepers and will be foreign to the intention of the present article. I will therefore pass on to the methods to be employed, and the conditions requisite to produce the most perfect queens possessing all the most desirable qualities.

But before proceeding further, I wish to impress upon the minds of all the fact that it requires hard labor, skill and perseverance to rear valuable queens, and those who do not appreciate this fact will have but poor success I am afraid. Queens reared in a shiftless manner without regard for, or knowledge of the laws and methods of correct breeding, are not worth the postage required to forward them to the purchaser. I give below a few ideas on queen-rearing, which may assist you in rearing your own or in selecting the best queen to purchase.

1. I have proved to my own satisfaction, at least, that queens reared from the egg are far superior in every way shape and manner to those reared from old larvæ. I have sufficiently demonstrated this to warrant me in setting it down as a fact and not as an affirmation or supposition. I have many times been called upon to investigate the condition of apiaries for the purpose of determining if possible why they proved unprofitable. In many instances I could find no defect in the management or pasturage, and seemingly no reason why there should be a short honey crop; but upon inquiring as to the method by which the queens were reared, I almost invariably found that they were reared, as far as known, from old larvæ, and in the absence of any other assignable cause, I fixed upon that as the reason, or one of the reasons why the bees were deficient in those qualities which ensure a good honey crop and success to the apiarist. I could cite many cases which I am cognizant of, where the weakness of the bees was attributable, in part at least, to this cause. The bees, in a state of nature, rear their queens from the egg, a fact which proves in itself that this is the preferable way. I believe the closer we follow nature in such matters the less liable we shall be to err. I am so fully persuaded of the importance of this point that I shall take the necessary pains to rear all queens from the egg and will tolerate no other.

2. Plenty of honey in the hive I have found to be an essential condition. A half starved colony will not have ambition enough to properly develop the cells. It has been my experience that, in order to secure the best developed cells, it is necessary to stimulate the colony in every way possible. To satisfy myself in regard to this point, I deprived a colony of nearly all its honey and let it rear a batch of queen cells. Their appearence was so unsatisfactory that I destroyed every one at once. I then gave the stock an abundance of honey and fed them regularly, letting them rear another batch. The result was surprising, the cells were large and well formed and hatched out fine queens. I therefore feel justified in saying that, in order to procure the finest developed cells, the colony must contain plenty of honey and be stimulated by every means at the command of the apiarist.

3. Queens reared in full colonies are, without doubt, the finest and most perfect. This would seem to be a self evident truth, as only in a full colony are all the conditions most favorable for the proper development of a valuable queen. Such queens are expensive to raise, and must be sold for a high price to make the breeder good, but I am inclined to believe that they are the cheapest for the buyer in the end.

As it is impossible to rear them all in full colonies, the breeder is obliged to resort to the nucleus system. It should be his aim to make all the conditions as favorable as possible; in other words he should endeavor to come as near "full colonies" as he can. To do this the nuclei should be kept as strong as possible, the stronger the better; the cells should be reared in full, strong colonies, and only transferred to the nuclei a few hours before the queens are ready to emerge. This requires watchfulness and care on the part of the breeder, and a considerable experience to tell just when the cells are ready to hatch.

In suming up I would say that too much care and skill cannot be exercised; too much time and money cannot be expended in the rearing of good queens, and, whatever the price they may be sold for, no breeder should allow a queen to drop into Uncle Sam's mail bag that he would not be willing to use himself.

It is only when customers demand the very best stock, be the price what it may, and breeders conscientiously supply such demand, that we may hope for a permanent improvement of the American bees. We can all readily understand how a few queens purchased and introduced into an apiary may either improve or deteriorate the whole, as they may be good or poor. I cannot but believe that all who appreciate this fact will give this subject their careful consideration and only purchase the best stock, which is as essential for the production of good honey crops as improved hives or methods of manipulation.

Colerain, Mass.

New York Tribune.

The Glucose-Honey Question.

PROF. A. J. COOK.

There is much significance in the fact that the glucose makers in convention in Chicago sat with closed doors. Secret sessions and consultations held in darkness comport well with this whole glucose business. It well becomes men to hide their counsels when their very business can only succeed as it is nourished by fraud and deception. As the glucose industries of the country only thrive as the result of the most dishonest practices, it seems a pity that they cannot be throttled, and the manufacture of glucose counted among the lost arts. It is said that all our sugars, with the exception of the granulated, are largely composed of this artificial glucose. Reputable authority asserts the same to be true of nearly all of our table syrups; and much of the so-called honey on the markets is largely composed of this same grape sugar. Yet no sign of these wicked frauds is to be seen on the labels. If not pronounced pure, the purchaser is left to infer that such is the case. This state of things is a disgrace to our civilization, and should be denounced as base and corrupting by every honest man. Laws, State and National, should be enacted and enforced, so that all who practice these adulterations and thus sell articles under a false trade mark, should receive condign punishment. All intelligent and right thinking bee-keepers see in honey adulterations a serious foe to the success of their business. They all feel and know that such men as Perrine and the Thurbers have done more to injure bee-keeping by their wholesale adulteration of honey a thousand times over than they have done to benefit it by their energy and effort to push our honey upon the markets of the world. True, they have taken our product, but they have done their best to blast its good name.

Without doubt nearly, if not all of this honey adulteration is the work of the middle men. It requires skill, and is much more easy and profitable to the extensive dealer. In the great houses of our large cities is where the villainous work is done. I do not believe that bee-keepers have engaged in it at all. If they have done so, it surely has been exceptional. Even to feed the bees glucose for exclusive brood-rearing is of slight advantage and doubtful propriety, and can in no way make up for the suspicion that will surely rest on bee-keepers if they deal in this weapon of the evil one for whatsoever purpose, even though the special use might be entirely right and proper. It is a matter for congratulation that all our bee journals are now united in opposition to all use of glucose in the apiary or by apiarists. This is most wise and politic. Our National and State societies of bee-keepers have worked most earnestly not only to create a right public sentiment, but to secure legislation to aid in putting down this dishonest and corrupt practice of adulteration. The Michigan Association took the initiative and exerted all possible influence to secure the excellent law passed by the last Legislature, looking to the suppression of this adulteration, and the traffic in adulterated articles. Many of our bee-keepers have written, spoken and circulated petitions for years at no small expense of time and money, to the end that this nefarious work might be put down. Bee-Keepers everywhere in our country are tremendously in earnest in this matter, and are urging upon the press and the people to cry out against adulteration, not only on moral grounds but from a practical standpoint, and it might be added from a sanitary consideration as well. It is greatly to be hoped that they will be aided by others, that public opinion may become so enlightened that the entire public shall become incensed at these monstrous frauds and shall arise in their might to stay the evil.

It is a well known fact that most kinds of honey will granulate or crystalize whenever the temperature is reduced below freezing, or even a higher degree than 32° F. A few kinds of honey, like that from the famous white sage of California, will not granulate, but this is so exceptional that the candying test, as so often urged by Mr. Dadant, is a pretty sure one, and is by far the most practical one that has been suggested. Honey that as winter approaches becomes solid, may be considered as pure.

If it remains fluid it may well be regarded as suspicious. It is stated that the Thurbers first used glucose to preserve the fluid condition of the honey, as granulated honey was objected to by their customers. Of course they were not slow to appreciate the further gain of selling glucose at double its market value. Dr. Dadant then is right in urging people to purchase only granulated honey, unless they purchase comb. Extracted honey if granulated may be easily reliquefied by setting the vessel containing it into hot water, that is not more than 180° F. for an hour or more. Caution is required that the vessel containing the honey shall be entirely surrounded by water, so that the honey shall not be over heated at the bottom of the vessel. In this way candied honey is reliquefied without loss of flavor or quality. If after reducing it it is kept in a warm place, it will not solidify again.

As already stated, the adulteration is done by the dealers. Once started, as suggested above, the excessive gains to the wholesale dealer secured its continuance until the sharp detectives over the sea brought the iniquitous practice to light. Yet the evil is by no means abated by the dealers. Hence another way to detect the pure from the spurious. If honey is offered for sale in a neat glass jar, with the trade mark of a New York or Chicago dealer, it may well be tested, especially if it shows no tendency to granulate upon exposure to the cold. On the other hand, if in tin pails or common fruit cans or jelly cups, with the name of a producer on the vessel, it may be regarded safely as honey. This will readily granulate, and very likely will be solid when purchased. This should be considered as a recommendation and not as an objection. It has been asserted of late that certain firms in Boston and New Jersey manufacture comb honey; that by use of delicate machinery the comb is made and afterward filled with glucose. It occurs to me that a person to give credence to such tales must know little of the wonderful delicacy of comb, and the exceeding attenuation of the walls to the cells, or else must be possessed of an amazing degree of credulity. To be sure, in these days of telephones we may believe almost anything possible; but I do not hesitate to say that the day of the manufacture of comb honey is not yet.

Michigan Agricultural College.

For the American Bee Journal.

Bee Stings—Blacks vs. Italians.

T. C. G.

I am but a novice in bee-culture, and do not pretend competency to instruct my brethren of the craft. Like all others, I was once a beginner, and have gone on until by some experience and many blunders, I am beginning to know enough of bee management to make it a matter of interest and much pleasure to me.

I see occasionally an article about bee stings, that great terror of the uninitiated; I see, also, that occasionally some old bee men manifest a little dread of these daggers given our little pets for defense of "vested rights." Having discovered a prompt and efficient remedy, I present it for trial. If applied immediately, the pain quickly subsides and no swelling follows. I have never known it to fail. It is also a remedy for the poison of all insects, and even of serpents. It is simply salpetre. Make a strong solution, upon being stung wet the place well with it immediately, and keep it so a moment or two and the work is done.

I have only 35 colonies, mostly blacks, which at this time are doing well. The honey flow at this time is grand indeed, if it will just last long enough. From a colony of blacks, transferred from a box gum in March last, and which built out upon foundation all the combs for the upper story of an eight-frame Langstroth hive, I have extracted to date a fraction over 78 pounds of first-class honey, from the upper story alone. I do not know that this is at all extraordinary, except with beginners.

I notice an old complaint among bee men, that all colonies do not prosper alike. Some are flush with bees and honey, and others far behind them. Some time since I noticed one of my colonies in this condition. I could see no good cause for this. Wishing to Italianize a certain colony of blacks, I deprived them of their queen, and put her in this lazy colony. In a very short time the bees seemed to wake up and go to work all right, and it soon became one of the best I have. Hence, I have concluded from this and other experiments in the same direction, that when we have a backward colony and no cause being visible, clip their queen's head, and give them a good one. A change will soon be apparent.

I am using section boxes for the first time. I placed, about 10 days since, a set of sections in a hive and looked for several days anxiously, for a beginning of work in them. The bees, however, "could not see it." They did not seem inclined to go up into the sections at all, even for a promenade. I removed the sections to another hive; here the result was the same. I was puzzled; thought I had fixed things wrong. At last I concluded to have my own way just a little; so applied the smoker freely and drove the whole pack up among the sections and left them. The next day they were busy up there and have worked right ahead ever since. Since then I have placed sections on a number of other hives and smoked each colony up right off, and in every instance they have gone immediately at work in the sections. This is perhaps nothing new to old bee men, but novices like me may appreciate the fact.

I have a few colonies of Italians—gentle fellows, easy to handle, and very pretty; but so far they have not surpassed my blacks in storing honey during the present honey flow; in fact, the blacks are much in the lead. I have noticed, however, that when honey is scarce, the Italians gather more than the blacks. My curiosity was excited to look into this matter and see what caused the difference. I at once observed in scarce times that the Italians were social and friendly neighbors to my blacks. All around the apiary Madame Italian paid her respects, peeping in here and there, and occasionally effecting an entrance, and after a while coming out, with her honey sac replenished from the labor of her neighbors. As Messrs. Heddon and Archimides would say,—"*Eureka.*" In times of scarcity, Italians rob most, at least mine do. Now if this is not peculiar to all Italians, then I have the real *Apis Americana*, and no mistake.

Luling, Tex.

Planter's Journal.

The Song of the Bee.

ALBERT F. KERCHIVAL.

With dreary hum, I go and come,
Like flitting, fairy maiden ;
And come and go where zephyrs blow
With flowery incense laden.

In hermit glen, from haunts of men
Afar, I seek my treasure,
And revel long where beauties throng
To list my tender measure.

By fount and spring, on wayward wing,
Each fancy bright pursuing,
Amid their bowers I see the flowers,
And trance them with their wooing.

With thrill of bliss bright lips I kiss,
Nor dream of faithless wronging,
And hour by hour from flower to flower,
I tell my tale of longing.

O'er hill and lawn, from rosy dawn,
Till sunset's lances quiver,
I flit and sing and sip and cling
Live lover fond forever.

And all day long with careless song
I drift o'er flowery meadows,
And sing and dream, and flash and gleam,
Till fall the twilight shadows.

For the American Bee Journal.

Mr. Heddon's Reply.

WM. F. CLARKE.

I am at a loss for language sufficiently expressive of the entire satisfaction, high admiration, and sincere pleasure with which I read Mr. Heddon's "Reply to Mr. Clarke" in the Bee Journal, of May 17th. He has fairly "won the cake" by the manly, and may I add, Christian way in which he has answered me. His article leaves nothing to be desired on my part, except the visit he so kinkly invites me to pay him, and, believing that it is not a mere formal invitation, I promise him that I shall certainly "drop in" upon him, so soon as time and money can be spared for the trip. Still somewhat critical and sceptical on points not fully demonstrated to my obtuse mind, I have a lingering doubt whether he will be able to convince me that his stomach is "not even bacterious." For, do not physiologists maintain that there are bacteria in every human stomach? I "specks" there are some both in his and mine.

A duty of explanation is thrown upon me in regard to some points touched upon in Mr. Heddon's courteous rejoinder. First, as to the pollen theory. Yes, I have read statements in the Bee Journal, and other apicultural periodicals, indicating that pollen is a source of trouble in wintering bees. The private letters referred to I have not seen, of course I freely admit that, under certain circumstances, bees may eat too much of it, just as human beings may eat too much of so wholesome a food as bread. If I partake too freely of fine flour bread and hot biscuit, of both which I am very fond, the result is a disordered stomach. But am I, on this account, to be wholly deprived of these articles of food? Must I have the staff of life taken away altogether because I sometimes lean on it too much? In like manner, I do not think we should clear our hives of pollen, but rather surround our bees with such conditions, that they will follow their natural instinct and take pollen, only in such proportion as will be healthful. For, I cannot but think that in a thoroughly normal state of things, even adult bees consume some pollen. "Who shall decide when doctors disagree?" While Mr. Heddon and other high authorities, whose opinions I respect, take the anti-pollen ground, there are those, equally deserving of deference, who hold an opposite view. For example, Mr. Gallup, than whom, perhaps, there is not a more experienced bee-keeper on this continent, has this "touch on pollen" in the last number of *Gleanings*: "Your old colony, with 'lots and slathers' of pollen, would winter the best; your new colony, with new comb, and but very little pollen, are the worst to winter every time." In transferring colonies from old box hives I never found one that was in prime condition in all respects, but it had "lots and slathers" of pollen in it. Mr. Heddon has had more experience in this line than I have, and will, I am sure, bear the same testimony. He will say, perhaps, that the bees being in first class condition, let the pollen alone, hence the quantity found in these hives. I, on my part would say, if the bees are all right in other respects, there is no need to deprive them of their stores of pollen, lest they indulge in it too freely. Bees, like human beings, are sometimes led or compelled by circumstances over which they have no control, to do what they would not do were the circumstances different and more favorable. All the trouble in bee-keeping grows out of our imperfect knowledge of what is the best environment of circumstances. When we discover that, and conform to it, I fancy bee-instinct may be safely trusted to do the rest.

Let me explain very briefly on another point, that I do not "hold to the ancient custom" of convincing people "by a little screw applied to their thumbs," nor to the modern custom of making them swear by a creed of any kind. I believe in free thought, and—free speech. In the old thumbscrew days, men could think as they pleased; it was the utterance of their thought that made them obnoxious to bigots. It is so now. The thumbscrew is absolete, but there are still modes of persecution and torture in vogue for the punishment of men who have the courage of their opinions, which are a disgrace to the age we live in. I take no stock in bigotry of any kind, whether ancient or modern. "I love, oh! how I love, THE FREE!"

Mr. Heddon rather misunderstands my meaning when he asks whether "the time has not gone by when you can satisfactorily answer a man's argument by pointing at what you think to be a hole in his coat?" I did not consider there was a hole in his coat at that spot. In fact, I thought it was a particularly sound part of the garment. He declined to believe in the absence of meridian evidence. That's right. Honesty is, and always will be, the best policy. It is better than a mere policy, for it is grand in principle. This first, and last.

"To thy own self be true,
Thou can'st not then be false to any man."

Fortunately, as I think, for me, my "labors and incomes" have been connected with both science and the supernatural. This supernatural is the key that unlocks the mysteries of science. I never expect by searching to find out God. I see the traces of his wisdom and power. He is "wonderful in counsel, excellent in working," and nowhere more so than in that marvellous microcosm, the bee-hive.

I am just aching to attend one or two of those family bee conventions which are daily held in the Heddon house, and hope I may have that pleasure before very long.

Listowel, Ont., May 19, 1882.

For the American Bee Journal.

Mating of Queens.

J. M. SHUCK.

The statements of Prof. Kroeh, on page 311, 1882, of the Bee Journal, will appear to many like a new necklace of old beads, and it is not often that anything seen in print is at variance with this old statement of facts, so called.

In 1879 I had two wingless queens that produced workers, and drone progeny in satisfactory proportions and numbers. In 1880 I clipped four queens just as they emerged from the cells, and confined the nuclei fifteen days; two produced workers and drones, and two were lost. In 1881 I clipped six queens, as in 1880, four of which matured into satisfactory queens and two were found dead.

I have witnessed laying queens leaving the hive for a flight unattended by a swarm, many times, and think it natural and proper that they should do so, for if the flight of queens be entirely restrained for generations, may it not occur that while the beauty, size, and length of tongue be increased, that the power of wing be greatly diminished. Our bees must be equipped with strong, tireless wings, the queens must possess them, and in order to produce the best results, must occasionally use them, in a long, airy, rapid flight.

Des Moines, Iowa.

For the American Bee Journal.

About "Dollar" Queens.

JAMES HEDDON.

Mr. Hutchinson, the Bee Journal and myself, all agree in regard to what I believe to be a fundamental principal in progressive breeding, viz: That the "best bees will have just the requisite number of stripes, whether it be one or a dozen." Mr. Hutchinson asks me if these "hybrids can be bred in-and-in, or if the strains must be kept up by continual crossings with pure races?" I answer emphatically, by breeding in-and-in.

There is in your apiary for what I know, and perhaps in some colony, the better traits which can be bred in-and-in, but if only in-and-in the United States, or the world, breed in-and-in the good traits of character, and out-and-out the converse, and success is yours.

I think it has been proven that while we are breeding in good qualities with bees, there is no danger of any sort of physical, mental, or moral degeneration, by mixing the same blood, as is sometimes markedly the case in the human family and domestic animals.

If all the meritorious traits of character were possessed by either the black or yellow race, then purity would be the word, but as such is far from the case, we must unite the two races, and breed in the good and out the bad qualities of both. That, in my judgment after experimenting on no very limited scale, is the quickest and surest road to success in procuring the "coming bee."

I do not want to get into any extended controversy on the cheap queen subject, but I do wish to give clearly my ideas and opinions in regard to it, however open to criticism they may be. It seems to me we should all agree upon this subject. I have been opposed to the cheap queen traffic; Why? Because the price is down to such a low point that it not only tempts, but almost forces the breeder to cut too many corners to produce the best stock.

I have advertised a little, and sold a few queens of all three classes: Tested, waranted, and dollar. Now, honestly, I believe I have been the only sufferer in what dollar queen business I have done. I have not obtained a price for them that paid me for time, compared with the same time and capital put into honey producing.

With tested queens at $2 or $3 the case is different. The present' condition of my apiary is such that the main difference between dollar and tested queens is, that I have to hold all queens till I become acquainted with the qualities of their workers and themselves, and I lose about 1 in 4 or 5 of them, that fall below my standard of excellence. Well, how do I dispose of those that are shut out—are below the test? Keep them to run down my stock? No. Sell them for dollar queens? No. What then? I destroy them, to help along the "survival of the fittest" to fill my honey barrels. Here is, you see, another tempting place in the system of general queen rearing. But I make tested queens a specialty. I rear no dollar queens. If I did, I should do as I used to, rear them just as I do any and all queens, the best I know how, sticking close to nature's laws, and ship them before tested, and make less money on them than I do now. But how about the purchaser? If he buys these cheap queens to breed from, he makes a mistake, unless he buys more than one, and then tests them himself. If he is hiring me to do his breeding for him, he is buying just what I should buy every time, if I know that the parties of whom I purchase are competent, and conscientious.

Several years ago I had 40 colonies, and wished to Italianize them. I bought 40 waranted queens at $2 each. I did better than to have bought an imported queen, and reared queens for myself. These queens were fertilized under far more favorable circumstances than I could command. Yes, more than 80 per cent. more favorable. I have had one colony gather more than $80 worth of honey in one season. But as not one of these warranted queens proved impure, I was a looser in not buying dollar queens from that honest man that I dealt with. Well, he did not sell any under that name, and I had to pay out the $80 or do worse.

But you may say you "advertise dollar queens." Yes, but my circular tells you that they are reared by another party, the gentleman who bought my Glenwood apiary one year ago; one who thinks, like Mr. Hutchinson, that he has the genius to rear them as good as they can be reared, and find a profit on them at one dollar.

The use of comb foundation, in securing all worker combs, placing the rearing of drones just where you choose in a location clear of other bees, has much to do with success in queen rearing and breeding.

Dowagiac, Mich.

* * *

Farmers' Home Journal.

A Review of the Past.

G. W. DEMAREE.

Sometimes it is not only profitable to us, but a real pleasure to look back over the rugged pathway by which we have reached the position we occupy, whatever that position may be.

These thoughts were suggested to me while making a sort of inventory of the discarded bee "fixens," that were to be seen lying around my shop and apiary the other day. There is to be seen a "bee gum" now doing service as a kind of a stand to set things on, that is a real wonder to the progressive apiarist. It was invented by your humble servant 20 years ago, and had the honor of accommodating a colony of native bees. It is a kind of a nondescript, neither a movable frame hive nor a common bee hive. It has some awful fixings on the inside, squinting considerably toward a frame hive, but it ain't. I sometimes smile when I pass by it, and ask myself why I could not have seen a little further at that time, and solved the mystery that Mr. Langstroth made so plain and simple, *i. e.*, a movable frame hive. Next comes my big clumsy honey boxes with glass sides and ends, as though I wanted iron bars between the bees, and my awkward self.

This reminds me of 20 years ago this blessed winter. At that time I wanted to purchase a few colonies of bees, and I had heard of a great bee man living on the Kentucky river. He was known far and near as a great bee man. I fixed up my two-horse sleigh—there being plenty of snow—in which to bring home my purchase, if I succeeded in buying some bees. I reached his house late in the evening and stayed with him over night. The next morning we walked out into the back yard to see the bees, and such an array of gums and old boxes one rarely ever sees in one place. There they stood, some looking like the famous "leaning towers," and others perpendicular, but all the picture of squalid poverty and woe. The sun was coming up and casting his light over the snow-mantled hills, and I took a survey of the surroundings, and it was easy to see the key to the position. The hills and clifts were covered with basswood (linden trees), while willow and soft maple were everywhere to be seen. The old fields furnished white clover, and the river bottoms gave a perpetual bloom. All this was what supported these bees, in spite of utter dilapidation. While I stood there, my friend discovered that I was interested in an old, old beech log, "gum," about 3 feet high, which was split open on both sides from top to bottom, and bound together with a rusty chain. Coming to my relief, he said: "That gum of bees is 30 years old." I attempted to explain by saying, "you mean that you have had bees in that log for that length of time." "I say that them bees are 30 years old!" I gave it up; he ought to know.

By the way, the other day while at the Capital, a gentleman heard me inquire of a lumber dealer for some material to make bee hives, and he at once proceeded to tell me of one of his neighbors who was a prodigy of a bee man. He keeps his bees in "gums made so that you can see the bees through glass," and the gums have "drawers" to them, etc. Of course I could not just then take the time to explain to him that his bee friend, like the veritable "Rip Van Winkle," had been sleeping these 20 years, and if I had him in my apiary one of these warm days I could open a hive and lift out the frames, one at a time, and and point out to him the "king" (queen) as she moved gently among the bright Italians as they calmly and gently hang on to the frame, and hear him exclaim that I had turned "young America," and was going contrary to "natur'."

Just think of a "king" honey bee reigning 30 years over subjects 30 years old, all the while in an old split beech log! Had I presumed to inform him that not a single worker bee that sipped the nectar from the white clover the previous season, would live to see another white clover blossom, he would have called me a "yearling," and looked upon me with pity and commiseration. I bought some bees, and left somewhat wiser in the ways of the world. If this old log, which doubtless had had the top pried off once a year, and the honey gouged out, gave 20 lbs. annually, the aggregate production of 30 years would be 600 lbs. Mr. L. C. Root, of New York, whose location could hardly be better than the one I have described, reports that his best colony the past season gave him 483 lbs. of surplus honey. Do you see?

Christiansburg, Ky.

Bee-Keepers' Instructor.

Poor Queen, No Colony.

L. C. ROOT.

A noted horseman of the past has said, "poor foot, no horse." So may we say of bees, "poor queen, no colony." I think that all who have had experience will agree upon this point.

That we want the very best queens that can be reared will not be disputed; but many writers of the present day are proving that they do not understand the requirements for rearing such queens. I shall take strong grounds against the practice of rearing what are known as "dollar queens," not that I object to any person rearing No. 1 queens for $1.00, but because I do not believe they can do so, and keep their stock up to the proper standard.

Keeping bees for profit is our main business, and I am arguing this question with the same interest that every bee-keeper has, who wants such bees as will gather most honey, winter best, and in fact are best for all purposes. I cannot here give my views as to the best methods of rearing queens, for lack of space, but will only say that the best methods must be continually followed up, which means more money, time and care, than the sale of dollar queens will warrant. Let me give some parallel illustrations:

We recently secured some oats of superior quality of one of the best farmers of our county. They were really fine, and much over weight. We examined them closely and found they contained a quantity of mustard seed and a portion of inferior oats. We sifted them, and from the 10 bushels saved about 6 bushels of the best. Again: Becoming interested in high-class poultry, we purchased the very best fowls we could secure, yet we find we can only hold them up to their present standard by selecting the very best birds each season.

Now, my point is, that even when we buy the very best queens we can without regard to price, this sifting process is necessary. I should not be quite so positive in this matter had I not tested it for myself, and know whereof I speak. When G. M. Doolittle proved the value of his strain of Italians by securing his large yield of honey, we should have felt ourselves to be short-sighted had we not at once procurred the best queen he would sell, without regard to price. So, when P. H. Elwood obtained 586 lbs. of honey from one hive, it was proof that he had stock which we wanted. And so with W. J. Davis, Dadant & Son, Julius Hoffman and many others. We consider the introduction of such improved stock indispensable, and yet, the sifting process must be continued. We must not for a moment entertain the thought that we have yet reached the desired degree of perfection, for we are a long, long way from it.

The substantial question to be asked is, how is this standard to be reached? Will the policy of rearing dollar queens tend in this direction? I am persuaded that it will not, no more than I think that the ruinously low prices for many of our apiarian supplies—such as comb foundation, etc., are tending to purity and superiority in their line.

Thomas G. Newman strikes solid blows at this cheap queen traffic in his JOURNAL of March 8, page 125, when he says: "What the bee-keepers of America want is better stock, not cheaper queens; more honey, not lighter yields: longer-lived bees, not greater disaster; certain profits, not doubtful results." Will dollar queens lead to this end?

The April number of the *California Apiculturist* contains an article from the pen of Mr. Gallup. This is from a man of experience, and is of particular value to those living in warm climates. He says: "The genuine Italians are no humbug; neither can the moth miller humbug them." His point made is, do not breed for color unless with the light color you gain the extra qualities needed.

I am not urging these views especially to influence the experienced bee-keepers of the present time. They are capable of judging for themselves. But the mass of bee-keepers who purchase Italian queens are such as have had no experience with them, and they are looking to our journals for information in regard to the best and cheapest methods of securing them. Are they to be led to believe that they may purchase queens for $1.00 each, expecting to begin under the most favorable conditions?

After an experience of 13 years, during the first 5 years of which I had the benefit of one of the longest and ripest experiences in America, I say emphatically that I consider the cheap queen traffic a hindrance to the best interests of profitable bee-keeping.

Mohawk, N. Y.

For the American Bee Journal.

Those Unkind Things.

HENRY ALLEY.

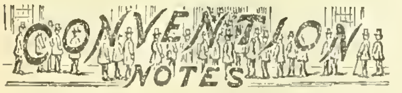
I was not aware that any very unkind things had been said about those who rear cheap queens. In giving a few facts about the cheap queen traffic, I did not intend to reflect on any man's reputation or business standing. In what I said I desired to be understood by all that good queens cannot be reared and sold at a paying profit for $1 apiece. Those who rear queens and send them out in 2 or 3 days after they commence to lay, can know nothing about the worth and quality of such queens. The time to judge of the quality in respect to their prolificness is when the bees commence to seal or cap over the worker brood. If there are eggs and brood in every cell not otherwise used by the bees, or, in other words, if the combs are solid with worker brood, put this queen down for a good one and worth $2 to any man. If the brood is scattering, some cells with eggs, other cells with capped brood, put her down as a worthless one. Now, how can these facts be known unless queens are kept at least 14 days after they commence to lay?

I know from my long experience in rearing queens, that all queens are not good ones, and, as they are sometimes reared, a large number are worthless. I base my opinion on reports I have read in the BEE JOURNAL from time to time. I know that good queens cannot be reared in the way some of your correspondents say they rear them.

But the greatest mistake is made in making a selection for a queen to breed from. To illustrate what I mean, I will give a bit of my own experience in this matter. I usually select for a "breeder" the largest, handsomest and most prolific queen I can find, selecting one, of course, that would give me fine queens as judged by her worker progeny. One year I selected a queen that would answer the above description. Not one of the queen cells from her eggs would hatch, though they were made in full hives, and were quite large, and apparently perfect. Well, here is another case: I selected one of my most profitable queens for a queen-mother. Her daughters were very fine. They were all fertilized in due time, and all commenced to lay promptly. Those queens were sent out after laying a few days. Reports came back that they did not lay, and others reported that the eggs would not hatch. The loss to me was $150. That is what it cost me to test that one queen. Now, you see the importance of testing queens for their laying qualities, if not for purity. Have both if we can, provided the cost is not above the reach of most bee-keepers. Sometimes I have complaints that queens sent out lay drone eggs only. About one queen in 500 will turn out just so. But this fact cannot be determined by keeping a queen 2 or 3 days. When the brood is capped over, then the fact is plainly seen. If people want cheap queens, rear them and supply them with all they want.

I will guarantee to sell queens for 50 cents each, provided the purchaser will never say one word about them to any one. How can I do that? Well, I will tell you how I can do it. I can compel a good strong colony of bees to build from 100 to 500 queen cells at one time. About 2 of the whole lot might be worth keeping, but the balance would not be worth as much as worker bees. I have often told you that the more queen cells one colony made, the poorer the queens would be, and that is just so. Unless I am more successful in the queen-rearing business this year than I have been for the last seven, I will retire from the field, and make room for those who have more money to lose than I have. If I do retire, I shall feel at liberty to say something about the secrets of queen-rearing, that is, I will tell how I can rear from one to 500 queen cells in a full colony of bees. Now, to those who are rearing cheap queens, I wish to say that what I have said in the BEE JOURNAL was not intended to reflect on your honesty, not in the least. When I am talking about queen-rearing, I think I know what I am about. If a man can make money rearing queens for $1, keep on rearing them. I cannot, and if I sell for that price or for a less sum, by-and-bye you can make up your minds that it is for self amusement.

Wenham, Mass.



Local Convention Directory.

1882. *Time and Place of Meeting.*

June 3—Hart County, Ky., at Woodsonville, Ky.

9—N. W. Wisconsin, at LaCrosse, Wis.
G. J. Pammel, Sec., LaCrosse, Wis,

Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.

Oct. 5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky,

Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Western Michigan.

The Western Michigan Bee-Keepers' Association convened according to appointment in the city of Grand Rapids, April 26th and 27th, 1882. The attendance was good, considering the unfavorable time of the year. Much interest and good feeling was manifested, and the discussion as follows:

T. M. Cobb was asked to give his experience the past winter. Said, being anxious for increase the past summer, he had divided artificially, and, the season being poor, they had failed to build up as he expected them to; consequently, had dwindled, and he had lost many. He would warn all to be cautious in this. Having no cellar suitable for the purpose of wintering, he had practiced packing with straw, setting the hives in rows. Had some colonies in chaff hives last winter, and should use them exclusively in the future.

The President wintered in a dry, well ventilated cellar 9 feet deep. Removed the caps from the hives (Langstroth), and slid back the board cover to leave a crack of an inch for ventilation. The winter before last, out of 60 colonies he had lost 7; 6 of these had starved. Last winter, no loss. Temperature of cellar never below 40°. Where he had found too much honey, he had extracted in August.

J. H. Robertson: Wintered in a cellar in which there was a spring of the temperature of 52°. The presence of water had a purifying effect on the atmosphere, and helped to maintain an evenness of temperature. Used burlaps over the frames to allow moisture to pass off. Winter before last, through carelessness, had lost 8 out of 408 colonies. The past winter out of 511 had lost 2. Temperature 50° to 55°. Preferred 50° to 40°. Objected to the cost of chaff hive.

Mr. Cobb, with others, objected to the trouble of carrying out and in a cellar. He thought chaff hives better for summer as well as winter, and little more expensive, taking cellar into the account. He objected to oil cloth or board cover for winter use.

The President thought the extra expense would more than pay for a good cellar. The one he used, which would hold 350 colonies, had cost him $50.

Mr. Robertson had built a cellar 4 feet in the ground, with earth walls 2 feet thick, rising 4 feet above the surface, to hold 390 colonies, for $25. In answer to a question, he said he preferred well-ripened clover honey to winter bees on. Buckwheat honey, some seasons, was very nice, but he put no dependence on it. Buckwheat grown on clay produced honey inferior to that grown on sandy soil. Successful wintering depended much on the management through the season.

Mr. R. E. Kilburn addressed the Convention as follows, on

Planting for Honey.

Much has been done within the past few years toward making bee-keeping a grand success, so far as improved implements, and the careful breeding of the best strains of bees are concerned. We now have in place of the log gums "in which the working of the busy bee was a mystery not to be solved," the movable comb hive, by the use of which we are enabled to admire and profit by those very laws of nature which, before, were so mysterious, and are prompted to exclaim with the poet: "Little creatures, that by a rule in nature teach the law of order to a peopled kingdom."

And as regards the improvements of bees, we now have the beautiful Italian, Cyprian and Syrian bees, bred to such a high state of excellency that our Italian bees are declared to be fully equal, if not superior, to the native bees of Italy, so much so, that the propriety of further importing is questioned. But still, a great many of us are not satisfied, and we say bee-keeping does not pay! Now let us pause a moment and ask, why? We certainly have all we can desire in the shape of improved implements and highly bred strains of bees, and if so, there can be only one other cause of failure provided we manage properly—it is a scarcity of honey-producing plants or natural flora. And if this is the cause, what is to be done? Our forests are melting away with wonderful rapidity, and within a few years our honey harvest from forest trees, such as basswood, sugar maple, whitewood or tulip tree, will be a thing of the past; while on our prairies and river bottoms, every tract of land that is brought under cultivation, and every swamp that is drained and made tillable, will take from the bees another portion of nature's flora, and from the apiarist a portion of his expected honey crop.

There seems to be only one great honey plant of all the natural flora, which is not injured by cultivation, but on the contrary is benefitted by it, this is white clover (*Trifolium repens*). That modest little flower, from which bees usually obtain the richest and best harvest of the season. But it will not do to depend entirely on white clover, for it sometimes, by reason of unpropitious weather, refusses to surrender to the bees the rich gift of nectar expected, and as a consequence, the bees are threatened with starvation, and the bee-keeper gets discouraged and exclaims: "It don't pay," and he is probably right.

There is only one thing left for us to do, we *must plant for honey*. Several of our leading apiarists have recognized this fact. Mr. D. A. Jones, of Beeton, Canada, a practical apiarist, and the first importer of Syrian and Cyprian bees to America, is reported to have 20 acres of land sown entirely to sweet clover, for the benefit of his bees. Sweet clover (*Melilotus alba*), is one of the very best honey-producing plants known. The honey which it produces is considered superior to white clover. It is very hardy, will grow anywhere, and on all kinds of soil. A correspondent of the BEE JOURNAL writes that if sweet clover be sown in a bed of Canada thistles, it will ultimately destroy them.

Bee-keepers should see to it that all waste land in their vicinity, such as thistle patches, fence corners, swamps, etc., be well stocked with sweet clover or some other honey-producing plants. Borage, catnip, motherwort, mustard, etc., for instance, and they will be greatly rewarded in the extra amount of honey they will procure, and will exclaim: "Bee-keeping does pay!" Besides, there will be a great improvement in the looks of the ground where the thistles used to be. An estimate has been made that an acre of ground sown to sweet clover will support 20 colonies of bees, and afford from 500 to 1,000 lbs. of honey. "Such estimates are evidently a little large," but, nevertheless, let us all plant for honey, and see if it does not pay.

Mr. Robertson: A. I. Root was of the opinion that cultivating plants exclusively for honey would not pay. He (Robertson) was satisfied it would pay to plant the Alsike clover. The honey was the same as that from white clover. Stock preferred Alsike to red clover. In seeding, use only 2 to 4 lbs. to an acre. It did best on low ground. He found bees swarming on sweet clover last summer for the first time. Bokhara clover was the same as sweet clover or melilot, the difference being in the seed; the former being imported, and more perfectly cleaned. He was inclined to think the best plant for honey was the Simpson honey plant or figwort. It would grow on any soil.

Mr. Kilburn said Mr. Dadant had found it difficult to grow in Illinois.

Sweet clover was a favorite of his. By cutting back, its blooming could be prolonged until snow.

J. J. Robinson said last year had shown him the need of planting for honey. His fall pasture was poor. He recommended the planting of mustard. It was profitable for its seed, and cattle would eat it.

Mr. Cobb had been benefitted by the yield from boneset last fall.

All agreed that while it does not pay to cultivate plants exclusively for honey, it would be found profitable to scatter seed by the roadsides and in waste places.

WM. M. S. DODGE, *Sec.*

SELECTIONS FROM OUR LETTER BOX

Wintered Well.—The BEE JOURNAL comes to hand regularly, and I like to see the able manner in which it is conducted. Long may it continue to condemn the adulteration of honey and food in any form. I see reports from all parts, some from near here; the weather has been cold nearly all the spring, with an occasional fine day to enliven up nature a little. Since the 10th the weather has been fine, with little or no frost. Last fall I told you of placing my 24 colonies in a cellar. This spring they all came out alive; 20 of them were in good condition, so I think with my little experience. They have from 6 to 9 frames filled with brood and eggs; frames 11x12 inches inside measure. Three of the others are weak in bees, brood and stores, having only from 1 to 3 frames filled with brood; the others are Italians; the queen died about 2 weeks after setting out, laying only a few eggs. The colony built two queen cells and they hatched only worker brood. 1. What was the reason? 2. Will sweet clover thrive as far north as 44° N latitude? There is a bird here that seems to eat nothing but bees. The throat and belly are all white; the top of the head and back, to look at, are black, but on opening the feathers on the head, the under feathers are a pretty orange. Some of the feathers I send with this. The bird is not so large as the robin. 3. What is it?

SAMUEL SANDERSON.

Glenallen, Ont., May 19, 1882.

[1. The larvæ was too far advanced before the cells were built and feeding of royal jelly commenced.

2. We think there is no doubt of it. It does excellently in other portions of Ontario.

3. There are two or three of our wild birds which might nearly answer your description, except that they do not eat bees that we are aware of. The better way will be to shoot one with fine shot and send to some ornithologist for name and habits.—ED.]

Early Queen-Rearing.—Please name the enclosed plant for me. It is covered with bees now, but it is the first season I have ever known them to pay any attention to it; but that is probably owing to the fact that there is nothing else for them. Our apple bloom was all killed after two days' work upon it, and the locust was far enough advanced when the freeze of the 12th of April came for it to be killed. So far it has been the worst spring for bees that I have known. My bees are in fine condition owing to constant attention and feeding. If we have a good red and white clover bloom I hope yet to get a good yield, as my bees work on red clover splendidly. I sowed several acres of sweet clover last fall, but it has not come up to my satisfaction. I do not know what is the cause of it, unless it sprouted last fall (it being so mild) and the winter killed it. I gave a queenless colony eggs on the 20th of March to rear a queen from, and on the 23d of April she was laying, which I consider very early queen-rearing for this section.

R. W. KEENE, M. D.

Versailles, Ky., May 4, 1882.

[The plant is Phacelia Purshii, for which there is no common name. Like its relatives in the Waterleaf family, it usually grows in moist, shady places. It flowers from April to June, and secretes a considerable amount of very limpid nectar. The flower is beautiful and interesting.—T. J. BURRILL, Ill. Ind. University.]

Parthenogenesis.—Will you allow me to express my gratification that you thought well enough of my articles to insert them in your excellent BEE JOURNAL, and at the same time to define my position? At the time that I wrote the paper you have headed "The Functions of the Queen bee," I believed that the evidence adduced by Dzierzon was conclusive. The experiments of the Abbe Ulivi indicate, however, to my mind, the possibility that former observers have misinterpreted some of the facts, and I now entertain some doubts which nothing but experiment can settle. This explanation is deemed necessary, because the last article you published was written some time before the one entitled "Parthenogenesis in Bees."

Hoboken, N. J. C. F. KROEH.

Pollen not Detrimental.—Bees wintered well in this section, and are now doing well. I have already received enough benefit from reading the BEE JOURNAL to pay for it a good while. What was said about starving caused me to look mine over, and I found my best colony without honey. I wintered 8 colonies. Two of them I took out of trees in the middle of August; 1 of them I gave a little honey, and the other none. I fed both all the syrup (made from the best white sugar) they would take; both wintered without the loss of a hundred bees that I could find, but one of them lost its queen about a month ago, and there was no brood or eggs in the hive. What I am getting at is this, I had a colony in the same kind of a hive that out-numbered either of the two I have mentioned at least four to one, and had more than 20 pounds of nice capped honey. It dwindled until two weeks ago, when there was only about 200 bees and the queen left. I put her with the swarm that had lost their queen, and she has done finely, so the trouble was not with the queen, and there was plenty of nice honey which was where the bees could get it. I think it would trouble some of the bee-keepers to tell what ailed that colony. A number of years ago I asked a man who had lost 80 colonies one winter, why he thought they died; he said he thought it was the want of bee-bread, as there was none in any of the hives, and there was plenty of honey. I don't take any stock in the pollen theory. I do not think it has anything to do with the bees dying, and I could give good reasons. T. ELLICOTT.

Fentonville, Mich., May 22, 1882.

Fastening Foundation in Sections.—Not knowing how others fastened their foundation into the section boxes I was obliged to find a way, and think I can put them in faster the way I shall describe than any way I have so far heard of. My sections were 4¼x4¼ and the sheets run almost 4½ inches in width, so after dividing the sheet in pieces large enough for the section, I trimmed off ¼ inch from the width; I then set my section up-side-down, and laid my foundation in far enough for it to extend ⅛ of an inch over the slot; in the meantime I had ready a lamp, with a box by its side of the same hight; I had a very small table knife (such as the children use) laid on top, and when my section was ready my knife was hot (if any preferred they could use a charcoal fire, if they did not wish to use oil). I then passed the knife over the foundation about twice, which caused it to melt and go into the slot; I then laid on the ⅛ inch of foundation that I cut off, and with about 2 or 3 strokes of the knife, at the same time reaching behind and raising the foundation to a perpendicular, when it is complete. I have not yet tried it, but it might be an advantage to use a frame as described on page 309, by Mr. L. James, in the BEE JOURNAL, but I can, in the manner described, put in or fill 3 sections per minute, when the foundation is cut, and think, by a little practice, I could yet put them in much faster.

Ridgeland, Ill. W. H. BUSSEY.

Cold in Georgia.—For nearly a week we have had a "snap" of unprecedentedly cold weather for this season of the year. For several days fires were required in order to be comfortable. Such weather is very bad for queen-rearing. The season thus far has been fine and the flow abundant; the quality being much better than usual, of lighter color and better flavor. J. P. H. BROWN.

Augusta, Ga., May 18, 1882.

The Worst has Come.—We had a freezing wind the past 48 hours, and last night it went down and cleared off. This morning, at 3 o'clock the mercury marked 14° below the freezing point. The ground is frozen solid 2 inches deep. You can imagine the effect. Fruit is in full bloom; corn, peas, and beans 6 inches high; every green thing is cut down. Scores of small birds are lying dead in my orchard; several still remain on the roost cold and stiff; bees are dying fearfully, and are now worse off than on April 1st. All drones are killed, and since the 15th, full colonies have dwindled one-half. Clover has a good stand, but I do not know whether it will kill out or not. It is fully one month later than usual. I fear that nothing will be realized from bees this year. E. A. MORGAN.

Arcadia, Wis., May 22, 1882.

Various Methods.—Out of 33 packed in chaff, 5 were lost in wintering; out of 58 buried in the ground, 26 were lost; those that were lost, however, were very weak last fall. The 2 that I put in the cellar came out very strong. All my colonies now are in good condition. G. H. ADAMS.

North Nassau, N. Y., May 18, 1882.

Poorest for 30 Years.—For the benefit of our Southern friends, I will give them a little report from Minnesota. It froze last night ¼ inch; ground white with snow; bees doing poor—the worst I ever saw. Everything works wrong. From 105 I have only 60, and some of those so light I will have to unite. I have kept bees 30 years, and this is the poorest, as well as the coldest I ever saw for the time of year. M. S. SNOW.

Osakis, Minn., May 22, 1882.

Cold in New York.—Cold here all the while yet, with frost every morning. Night before last ice formed as thick as a window glass. We have not had one warm day this spring. Bees have but little brood and the show for 1882 as a good honey year is poor in this locality. G. M. DOOLITTLE.

Borodino, N. Y., May 18, 1882.

Bees in Alabama.—Bees are doing well, gathering honey from fruit bloom, tulip, etc.; they are richer in honey than at any time since 1877.

JOHN M. RYAN.

Apple Grove, Ala., May 16, 1882.

Tilia Americana in London.—I see Mr. Stalhammar, of Sweden, notices a Tilia (page 263 of AMERICAN BEE JOURNAL), which flowers in September. I noticed some in England last year flowering in August. It was a larger leaf, and the stalk had a half bend below its junction with the leaf, which made the leaf turn its whitish under-side outwards. It had also a drooping habit, and the flowers were unusually fragrant and larger than the common lime (linden) which flowers in England in May and June. On inquiry at the Arboretum at Kew Gardens, I was told it was called *Tilia alba Americana.* Another authority added *Pedulosa.* I planted 2 such trees last autumn, and hope this year to find I have been supplied with the right thing. H. JONAS.

London, Eng., May 12, 1882.

Death of M. Parse.—Our friend and brother, Melvin Parse, Pine Bluff, Ark., died on the 12th inst., after a very short illness, and unexpectedly. Mr. Parse was a good man and a good bee-keeper, and deserves a notice in your valuable paper.

CHAS. F. MUTH.

Cincinnati, O., May 24, 1882.

A Swarm in New Jersey.—I had a fine swarm from one of my strongest colonies to-day. It is the first swarm of the season. Bees are breeding finely now, and the weather has just now become warm and pleasant. Fruit blossoms are opening profusely. I have a number of colonies commencing in sections. JOS. H. M. COOK.

Caldwell, N. J., May 20, 1882.

The Weather in Scotland. — The weather has been very cold and changeable of late, so that our bees have had little chance of doing much yet. Throughout the country all seem to be in good order, and with some fine weather we expect a good season. Mr. Anderson, one of the Judges at the Perth Show, intends to take a tour through America this summer. He leaves here on Friday, June 2d, in the Ethiopia, for New York. I have sent you 3 copies of our prize schedule. I shall be very glad to take charge of any exhibits the American bee friends may be pleased to send, either for exhibition or competition.

JOHN D. HUTCHISON.

Glasgow, Scotland, May 13, 1882.

More Encouraged.—Warm weather appears to have set in now, and the growth of vegetation can be seen daily. We have some nice rain today. If the warm weather continues, the season may not be so far behind, and bees may be able to make up for lost time. EDWARD MOORE.

Barrie, Ont., May 23, 1882.

Destroying Drones.—My bees wintered well. Had drones in March, but the last month has been very hard on them, and they are killing off the drones. I am feeding to keep them alive until white clover bloom, as the heavy frosts destroyed the apple and all fruit bloom. White clover is coming on now, but the outlook for honey harvest is a little gloomy. W. H. GRAVES.

Duncan, Ill., May 23, 1882.

◆

☞ The Northwestern Wisconsin Bee-Keepers' Society will meet in La-Crosse, Wis., June 9, 1882, in the City Hall. A good attendance is desired, as arrangements have been made for articles from practical apiarists.

G. J. PAMMEL, *Sec.*

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THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

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For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
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Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

Always Keep a Smile for Mother.—The above is the name of an elegant new song and chorus, by the popular writer, Charlie Baker, who has written some of the most popular songs in America. The words are elegant and music easy, so that every body will be able to play it. Price 35 cents per copy. Will be sent to any address in the United States, upon receipt of marked price, by addressing the publisher, F. W. Helmick, 136 West 4th St., Cincinnati, O. For sale by all music dealers.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., May 29, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 7c. for dark and 9c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax, on arrival; 18@22c. for medium grade, and 15@17c, for dark.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand for extracted honey, in the retail way, is fair, and our sales for manufacturing purposes were very good of late. We pay 7@9c. on arrival. Prices for comb honey nominal and demand slow.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for honey is light, most of the trade finding fault with the best offered, as it is more or less candied. Values are not steady, prices being made to meet the views of the purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—There are a good many small lots of very nice white section honey coming in now from time to time. White sells readily at 22c.; second quality 18@20c. Buckwheat, no sale at any price. Extracted, none in market.

BEESWAX—25@30c.

A. C. KENDEL, 115 Ontario Street.

ST. LOUIS.

HONEY—In fair demand. Strained selling at 8@10c.; comb scarce—nominal at 18@22c.

BEESWAX—Stiff at 21@22c. for prime.

R. C. GREER & Co., 117 N. Main Street.

NEW YORK.

HONEY—The market for honey is exceedingly dull, with not enough movement to establish prices, and quotations therefore are entirely nominal. White clover, fancy, 1 lb. bxs., 15@16c.; white clover, good to choice, 1 and 2 lb. bxs., 13@14c; buckwheat, 2 lb. bxs., per lb., 11@12c. Extracted and strained, white, 9@10c.; dark 7@8c.

BEESWAX—There is a fair demand for prime lots of wax, and with the supply moderate prices are firmly sustained. Western, pure, 24@24½c.; Southern pure, 25@25½c.

D. W. QUINBY, 105 Park Place.

SAN FRANCISCO.

HONEY—A lot of 118 cases candied and crossed comb, light and dark mixed, arrived this week and was sold at 7¼c., 30 days time. A transfer of 54 cases extracted is noted, of which 27 cases light brought 8c., and the balance, dark, sold for 6¾c. We quote white comb, 13@14c.; dark to good, 7@11c. Extracted, choice to extra white, 7⅜@8c.; dark and candied, 6¼@6¾c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

◆

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

CLUBBING LIST.

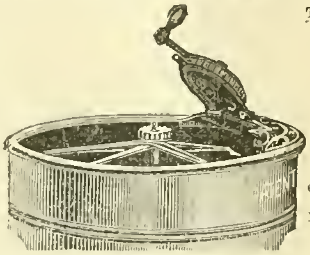
We supply the Weekly **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal, ...	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00.	2 60
Bee-Keepers' Instructor (W.Thomas)	2 50..	2 35
The 4 above-named papers.......	4 50..	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper........	2 60..	2 40
The 7 above-named papers.......	6 30..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881...............	2 85..	2 75
Binder for Weekly for 1882..........	2 75..	2 50

◆

☞ This one fact is being brought before the minds of the people of the United States: Kendall's Spavin Cure is not excelled as a liniment. 18w4t

U. S. STANDARD,



THE NEW HONEY Extractor, contains special improvements not found in any other. Quality extra, prices low. Ask your supply dealer for them, or send for illustrated Circular, to the Apiarian Supply Dealers whose names appear below:

J. V. CALDWELL, Cambridge, Henry Co., Ill.
ALEX. GLEASON & CO., Toledo, O.
MERRIAM & FALCONER, Jamestown, N. Y.
P. L. VIALLON, Bayou Goula, La.
A. B. WEED, Detroit, Mich. 22w4t

Pure Italian Bees

at reasonable prices.

FULL COLONIES IN LANGSTROTH HIVES,

QUEENS AND NUCLEI.

Satisfaction guaranteed in every sale.

22w8t **JOHN F. DIPMAN,** Fremont, Ohio.

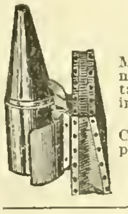
NEW IDEAS.

Foundation ready for business, sheets bound with a light wooden rim, sample 6c; Bee's Tongue Register, sent by mail for $2.25; Italian Queens improved by a new process; Italian or Black Bees for sale in a hive adapted to migratory bee-keeping—can be securely closed for moving in one minute. For particulars address,

9sm1y **JOHN H. MARTIN,** Hartford, N. Y.

REMOVAL—I have changed my location from Bloomingdale, Mich., to Belle Centre, Ohio, and expect, aside from professional duties, to rear some **CHOICE ITALIAN QUEENS.**

22w1t W. B. ANDERSON, M. D.



BINGHAM SMOKERS.

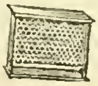
I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including the CONQUEROR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Excelsior Dunham and Vandervort
FOUNDATION.

Owing to the large advance in the price of wax, I now quote prices thus: Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

J. V. CALDWELL,
3w1y Cambridge, Henry Co., Ill.

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65 *ENGRAVINGS.*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

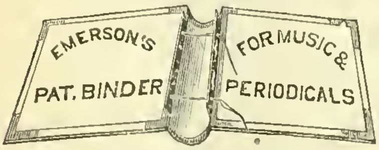
4—RACES OF BEES—4

Italian, Cyprian, Holy Land and Hungarian Queens.—Warranted queens, $1.50; extra selected, $1.75; tested, $2. Send for my **21st Annual Circular.**
19wtf **HENRY ALLEY,** Wenham, Mass.

BIND YOUR JOURNALS

AND KEEP THEM

NEAT AND CLEAN.



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IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Bee Journal of 1880	**50c.**
For Bee Journal of 1881	**85c.**
For Bee Journal of 1882	**75c.**

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book. G. W. FISHER,
Box 238, Rochester, N.Y.

Also for sale at the BEE JOURNAL Office.
2w6m.

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen	$4.50
2-frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1..	2.50
" " per half doz., after July 1	13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,
1wtf Burlington, Iowa.

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100 Colonies

FOR SALE. ALSO,

TESTED AND DOLLAR QUEENS

AND

BEES BY THE POUND.

Send address for prices.
1w35t **JAMES HEDDON,** Dowagiac, Mich.

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.
1w1y **D. S. GIVEN & C.,** Hoopeston, Ill.

1882-J. S. TADLOCK,-1882

LULING, CALDWELL CO., TEXAS.

Breeder of Pure Italian Queens. I use one of J. H. Nellis' best imported queens. Tested Queen, $2.50; per half-dozen, $13.50. Select Tested, $3; per half-dozen, $16. No "Dollar" or nuclei-queens handled. Safe arrival and satisfaction guaranteed, if possible. 14w39t

---

1882.-ITALIAN QUEENS.-1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby Smoker for $1.50. Address all orders to

L. J. DIEHL,
(Money Order Office)—Butler, Dekalb Co., Ind.
10wtf

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
13wtf Abronia, Mich.

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

—"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Comb foundation on Dunham machine, 25 lbs. or over, 35c. per lb.; on Root machine, thin, for boxes, 40c. per lb. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1w1y.

PRIZE QUEENS FOR 1882,

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

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LOOK HERE!

If you want cheap bees and hives to suit, good Cyprian, Albino or Italian Queens, Comb Foundation, all kinds, Section Boxes, and everything a live apiarist needs, send for prices.

Full Colonies and Nuclei a Specialty

with good young Queens. Give me a call, friends, and I will try and please you. (Box 819)

E. T. FLANAGAN, Rose Hill Apiary,
5w1y Belleville, St. Clair County, Ill.

A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents;** in paper covers, **50 cents,** postpaid.

925 W. Madison Street, Chicago, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers' Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

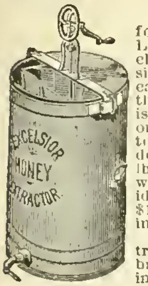
It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**



EXCELSIOR
HONEY EXTRACTORS.

In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets.

For 2 American frames,	13x13	inches	$8 00
For 2 Langstroth "	10x18	"	8 00
For 3 " "	10x18	"	10 00
For 4 " "	10x18	"	14 00
For 2 frames of any size,	13x20	"	12 00
For 3 " "	12½x20	"	12 00
For 4 " "	13x20	"	16 00

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
1wly Hamilton, Hancock Co. Ill.

We now quote an

Advance of 5 Cents per pound

on the PRICES PRINTED IN OUR CIRCULARS, wholesale or retail. 15wtf

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CONCERNING
THE CLIMATE,
Mines, Manufactories and Commerce
OF
COLORADO,

will be promptly and truthfully answered by private letter, upon sending One Dollar to the

Woman's Industrial Association,
15w6mp 291 Sixteenth St., **DENVER, COL.**

Advance in Foundation.

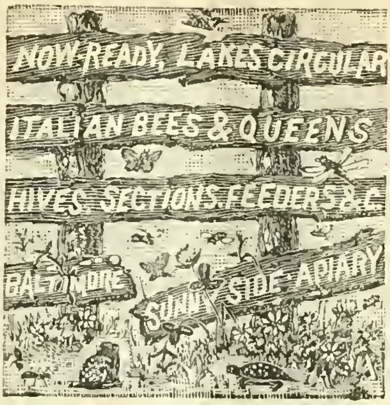
The manufacturers of Comb Foundation have advanced the price 5 cents per pound, owing to the increased cost of Beeswax.

From this date, and until further notice, the price of all the styles and kinds of Foundation, except the VanDeusen (flat bottom), will be

Advanced 5 Cents per pound,

from the advertised price in my Catalogue.

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL



FREE! FREE!

Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.

11wtf E. A. THOMAS & CO., Coleraine, Mass.

DUNHAM COMB FOUNDATION—40c. per pound; extra thin and bright, 10 sq. ft. to the lb. 48c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13wly

KNOW THYSELF.

GOLD MEDAL Awarded the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self-Preservation;" bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only $1.25 sent by mail; illustrated sample, 6c; send now. Address Peabody Medical institute or Dr. W. H. PARKER, No. 4 Bulfinch st., Boston. 22wly

QUEENS--QUEENS

Circulars free. Address,
15w6m **JOS. M. BROOKS**, Columbus, Ind.

Florida Land--640 Acres

☞ CHEAP FOR CASH. ☜

DESCRIPTION,—Sec. 4, township 7, south range 7 west, Franklin county, Florida, situated about 50 miles south of the Georgia line, 25 miles west of the city of Tallahasse, the capital of the State, and about 25 miles northeast of the city of Apalachicola, a seaport on the Gulf of Mexico, and within 2 sections (5 and 6) of the Apalachicola river; the soil is a rich, sandy loam, covered with timber.

It was conveyed on Dec. 31st, 1875, by Col. Alexander McDonald, who owned 6 sections, including the above, to J. M. Murphy, for $3,200, and on Sept. 5th, 1877, by him conveyed to the undersigned for $3,000. The title is perfect, and it is unincumbered, as shown by an abstract from the Records of the county, duly attested by the County Clerk; the taxes are all paid and the receipts are in my possession.

I will sell the above at a bargain for cash, or trade for a small farm, or other desirable property. An offer for it is respectfully solicited. Address,

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

MAPS AND CHARTS—$1,000 can be made in six months selling Tunison's Maps and Charts—**36** page Catalogue free. Address, H. C. TUNISON, Jacksonville, Ill., or Columbus, O. 18w6tp

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. *Sells at Sight.* Double your money. Address Dr. Chase's Printing House, Ann Arbor, Mich. 36m1yp

The Bee-Keeper's Guide;
OR,
MANUAL OF THE APIARY,
By A. J. COOK,
Of Lansing, Professor of Entomology in the
State Agricultural College of Michigan.

—:o:—

320 Pages; 133 Fine Illustrations.

—:o:—

This is a new edition of Prof. Cook's Manual of the Apiary, enlarged and elegantly illustrated. The first edition of 3,000 copies was exhausted in about 18 months—a sale unprecedented in the annals of bee-culture. This new work has been produced with great care, patient study and persistent research. It comprises a full delineation of the anatomy and physiology of the honey bee, illustrated with many costly wood engravings—the products of the Honey Bee; the races of bees; full descriptions of honey-producing plants, trees, shrubs, etc., splendidly illustrated—and last, though not least, detailed instructions for the various manipulations necessary in the apiary.

This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

—:o:—

Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—*L'Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—*British Bee Journal.*

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYNKOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—A. E. WENZEL.

My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—WM. VAN ANTWERP, M. D

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Bulletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

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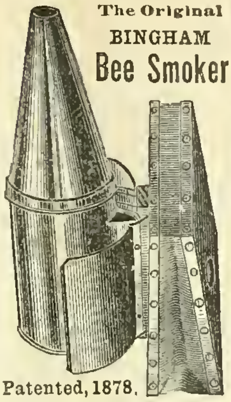

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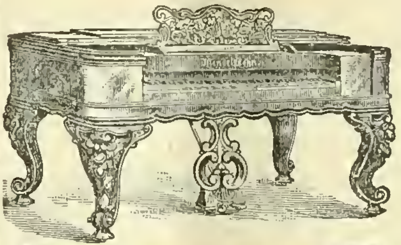

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.. 353
Crops in General...................................... 353
Queen Trap... 353
The Weather in Colorado.......................... 353
Natural vs. Forced Queens 354
Vennor's Prognostications........................ 354

Among Our Exchanges—

Adulterated Flour.................................... 355
Humorous.. 355
A German Apiary...................................... 355
Fairs and their Advantages....................... 356
Swarming and Dividing for Increase...... 356

Correspondence—

Florida as a Bee Country 356
Rearing and Introducing Queens.............. 357
Care of Comb Honey—No. 2.................... 358
Cultivation of Plants for Bees.................. 358
Management of Bees in Spring 359
A Peculiar Incident 359

Convention Notes—

Western Michigan.................................... 360
  Italianizing an Apiary............................ 360
  Artificial Swarming................................ 360
  Cyprian Bees.. 360
  Thoughts on Bee-Keeping...................... 360
  Clipping Queens 361
Maine State Convention 361

Selections from Our Letter Box—

Hunting Wild Bees.................................. 361
All Swarmed in May................................. 361
Barberry 361
Worker Bees in Queen Cells.................... 362
The Honey Season in California.............. 362
Prevention of Swarming.......................... 362
Wild Honeysuckle... 362
Use New Honey Packages 363
Warranted Queens.................................. 363
Duplicating Eggs..................................... 363
In the Sweet By-and-By.......................... 363
Winter in May... 363
Disgusting... 363

Crops in General.—By correspondence from all parts of the country we learn that crops though backward, are generally in good condition. It is stated by an exchange "that the cool, wet weather has not been unfavorable for wheat, and has rendered it the conspicuous service of keeping back the fatal chinch-bug. If it has injured the corn it may have more than compensated for it by the opportunity it has afforded the young wheat of getting a good start before the chinch-bug was able to be out. But it is not yet certain that the corn has been seriously injured. It is backward; large tracts that should have been planted are not planted yet. In many localities the plant appears rather feeble. But, on the other hand, the planting can be finished very rapidly if a few warm days should be granted just at this time. Generally where the corn is up it is of good thickness, and promises, with warm, dry weather, to make ample amends for being behind time." Fruit promises well—the localities are but few where it has been injured—it has rarely promised better. As for Texas, everything there is in the finest possible condition; cereals, cotton, fruit, everything that grows out of the ground promises uncommonly well. White clover and pasture grasses are very thrifty everywhere, affording excellent grazing.

◆

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

Queen Trap.—Mr. F. Funk, Beverly, Ill., has sent us samples of his "Queen Bee Trap," which he claims to be a "sure and safe way to clip their wings without danger of injuring them." The trap consists of a small coil of turned wire, the coil being much larger at one end than the other. The large end of the cage is intended to be put down over the queen when on the comb, as she enters it the cage is to be lifted and both ends closed, then the wing can be clipped through the wire coil, without handling the queen or injuring her in any way.

◆

The Weather in Colorado.—A letter from Denver informs us that the season there is very backward as it is in all the Northern States. The writer says:

> "The weather is quite cool not being near so warm and pleasant as it was in February and March, and so much rain is unusual for Colorado; but although we in the city are generally displeased with it, the value it is to farmers can hardly be fully estimated. It will start vegetation everywhere, and make the flowers in the foothills, that yield so much pasture for bees, bloom in all their beauty and fragrance."

◆

☞ Col. Pearson, President of the Alsatian Bee-Keepers' Society, writes on April 6th to the *Bienen Zuchter*, published at Strassbourg, Germany, as follows: "My colonies of bees are in excellent condition. They have never been as populous as they are now. The season has not been favorable for apiculture; the few fruit trees in this vicinity are not sufficient to give the bees very much honey, at this season.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Natural versus Forced Queens.

Mr. Edward Moore, Barrie, Ont., addresses the following pertinent letter regarding queen-rearing :

> In "Cook's Manual" instructions are given for rearing queens. It appears necessary to drive the bees to the necessity of rearing queens for the purpose of increasing their numbers for traffic, for several reasons.
>
> On page 6, of the specimen number of this year's volume sent last year, there are some apparent objections raised, which appear reasonable. Are queens reared in the way referred to as fine, large, healthy, strong, prolific, long-lived, and in every respect as good as queens reared in the natural order? Those who have had long practical experience in rearing queens should be able to tell, although it may be against the interest of some to do so. Will some one please answer for the information of the less experienced in apiculture?

There are many strong arguments adduced by the advocates of natural queen-rearing through the swarming impulse, some of which seem to us unanswerable, especially the fact that eggs are almost invariably selected by the bees from which to rear queens, when swarming is contemplated, and the further fact that the honey flow generally prevails, and the bees are most populous and prosperous when the *emeute* takes place, and the most careful and deliberate provision is made for the future welfare of the parent colony. If, however, the colony be deprived of their queen, and eggs, larvæ and sealed brood prevail, the bees naturally force the maturity of a new queen by utilizing larvæ sometimes in various stages from which to rear her, as they well know that depletion must take place until a new mother is provided. In colonies of this kind, where queen-rearing is forced, it is not unusual to find queen cells, even after a week has elapsed, in various stages of development—some perhaps capped over, while others are but scarcely commenced, or with the larvæ just placed in, and the feeding of royal jelly not completed. The result is, that the larvæ 2, 3 or 4 days old from the time of hatching from the egg, are the first to emerge from the cells as queens—and the first out, although not more than two-thirds developed and wholly worthless, has vitality and vindictiveness enough to destroy the remainder. It is possible sometimes to rear good queens in this manner, but we believe they are the exception.

There is a serious objection, however, on the part of some queen-breeders to the natural method of queen-rearing, as the number of cells built is not great enough to make their business profitable, and they have to await the pleasure of the bees and favorableness of the weather to procure any cells at all.

If, however, our favorite method of artificial swarming be practiced, the objectionable features of the forcing process will be overcome, and all the desirable ones of the natural swarming impulse will be obtained, while the number of cells will be limited only by the ambition and skill of the apiarist. The following is the simplest and most satisfactory manner : When the weather has become warm and settled, with honey coming in rapid enough to stimulate breeding to the fullest extent, remove a frame from the colony you wish to rear queens from, substituting therefor a frame of foundation in the center of the brood-nest; keep a close watch until it is well filled with eggs, then before any are hatched, remove from its stand, while the bees are working busiest, the strongest colony in the yard, and put an empty hive in its place ; now put in the center of this the comb with fresh eggs, cutting away the lower one-third in a zig-zag shape, to afford an irregular edge on which to build the cells; if you can find a frame with all sealed brood place it alongside with all the young bees adhering to it, fill up the hive with its complement of empty combs or foundation, or at least enough to accommodate the bees, adding others as needed, cover well with blankets or cotton cloth, and put on the hive cover. By this method you will secure all the field-workers from the colony removed, and but little hinder it in general work ; you will also get a liberal batch of queen-cells from your best queen mother, all maturing about the same time, and all can be left in the hive till nearly the last moment, and, we believe, all equally good as the best.

Twenty-four hours before removing the queen-cells, form your nuclei by placing a frame of brood (in any stage), a frame of honey, and an empty comb in a full-size hive, putting in a division board to contract the space and retain the heat ; on the following day, cut a hole in the frame of brood comb and trim out a queen cell from the queen-breeding colony to fit it ; now replace in the hive and cover well. Unless the weather be quite warm, these queens should not emerge from the cells in less than fourteen to fifteen days, and we believe the longer they are left in the hive where built the more satisfactory they will prove. After the queen has hatched, another empty comb can be added to the nucleus if desirable, though it is not necessary unless very crowded with bees, and then, perhaps, it had better be delayed till the queen gets to laying. We have in this manner reared a full batch of queens, the last hatching within two hours of the first, all well developed, and equally as good in every respect as any swarm-reared queens we ever saw.

One thing should always be borne in mind, good queens are not liable to be produced, by any method, in cold, changeable weather, and we hardly think it matters much how many are reared from one queen, whether it be one or one hundred, if the weather and method are favorable, and eggs sufficient be given a large artificial swarm from which to make its selection. We know nothing of the methods practiced by queen-breeders generally or individually, and only give the foregoing as the result of our many experiments, and a desire to contribute the same to the benefit of those who wish to breed the best from the best.

Vennor's Prognostications.

Not because we have implicit confidence in Vennor's weather predictions, but because many of our readers have the curiosity to know what he has said concerning the coming summer, do we give the following as his forecast :

> I desire to give a short, but comprehensive outline of what, in my humble opinion, are likely to be most remarkable features of the summer and autumn of the year 1882 :
>
> 1. A season that will well merit the designation of cool to cold and wet generally. Not that there will not be terms of summer warmth and even intense heat for periods, but rather that these last will appear in the retrospect as of but comparative insignificance, or as the exception to the general rule.
>
> 2. The season will be marked by not only great precipitation, but by a mugginess of atmosphere generally, caused by the reeking condition of the earth and the long continuance of a cloudy sky. This will result in periods of extreme sultriness and heavy weather, during which the thunder and hail-storms will occur. In other words the summer will be the reverse of clear and dry.
>
> 3. There is a likelihood of June and

August frosts in northern, western and southern sections, and a general cold wave may occur toward midsummer.

4. The autumn months will continue moist. September will probably give rains and floods in western Canada and in western and southern sections of the United States. October will be much the same, with early cold and snow falls. November will begin the winter of 1882-83—a winter likely to be memorable on account of its exceptionally heavy snow falls and very cold weather over the whole Northern Hemisphere. That a "cold and wet summer is invariably followed by a cold and stormy winter," is a truth now so well proven and borne out by the testimony of past records that we cannot lightly put it aside; and if we have good and sufficient grounds for predicting the former—as we most assuredly have at this time—it is but right that we should warn the people of the latter in good season.

5th and last. The season will probably be the first of a couple of wet summers, and as 1882 so is 1883 likely to be. But here we must stop for the present. HENRY G. VENNOR.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Adulterated Flour.—New cases of fraud are almost daily being brought to notice—not only in America but in Europe. We hope the day will soon come when we may have a congress of nations who will agree upon the main features of a law to be recommended to the law makers of each Country to stop the nefarious business of adulteration, which has now become so universal. From a foreign exchange we extract the following on the adulteration of flour:

> The usual mode of adulteration is to use oxide of zinc. German chemists have found 3 to 3.5 per cent. of oxide of zinc in bread, yet zinc and copper may be discovered to a certain degree in bread baked with old wood that has been covered with these metals, the wood readily impregnating itself with these mineral elements.
>
> Flour is also adulterated with spar (baritza), plaster of Venice, chalk, pulverized stone, etc., thus increasing the weight. Exportations have been made from Netherlands of so-called imitation flour, made of crushed spar and plaster of Venice. These exportations were made to such an extent that the Prussian minister of commerce found it necessary to publish a warning against the production. It was observed that the mixture of plaster of Venice amounted to 30 per cent., while the mixture of spar showed but 16 to 20 per cent. Imitation flour is used to increase the weight of genuine flour by mixture.

Humorous.—"Bill Arp" writes the following to the *Southern Cultivator*. It is a "good hit" on old-fashioned bee-keeping:

> "When I hear the horn blowing, and the tin pans beating, and the bells a ringing, I know what is the matter, and so I drop everything and go to the house to hive the bees. It is a wonder that all this fuss don't drive them clean away, but it don't seem to effect 'em one way or another. If they have made up their minds to go they are going, and *vicy voorcy*. I've saved every swarm this spring with very little trouble. We don't run much science on bees at my house—haven't got time. These fancy hives are all right, I reckon, for educated bees with an educated manager to watch 'em and look after 'em every day, but they don't suit me nor my old-fashioned bees, and I don't want to be bothered with the little insects very much, nohow. Nevertheless, we are educated to some extent and don't use the old hollow gum like our fathers did. I make a plain box gum with an upstairs and a little door on a hinge to the second floor, and I put a little box with a glass front in there and it is no trouble to take it out when they fill it with honey. I make no movable frames. My hives are open at the bottom and set upon little bits of iron, or big nails, or even little rocks at the corners, so there is no crack or joint for the moth to lay in. In the winter I let the hive down on the plank to keep the cold out. I have had very good luck this way and not much trouble. Bees are very much like the human family. The queen is the head of the house and has power and authority, and fares sumptuously every day; but like all great potentates she lives shut up in her palace and has a guard to protect her, and hardly ever gets out to enjoy the sunshine or the flowers. Sorter like the King or the Queen, or the Czar, or even the President, for somebody is always on the lookout to shoot 'em for something or for nothing, and it don't matter which. Then there are the big, fat, lazy drones that lie around and eat and sleep and have to be supported and don't do a lick of work. and we can pick out just such folks in this subloonary world who don't contribute a thing to the public good and never earn an honest dollar, but are always foraging on somebody, swindling, gambling or speculating, and when they get ready to die they can't recall a single benefit they have conferred upon mankind. Then there are working bees that gather all the honey and make all the comb, fill all the little cells and store it away for winter, and they are never idle, and what they work for they will defend and protect. Just so with the laboring classes who toil and sweat in the field and work-shop, and in the mines, whose constant labor supports and sustains the world—who live hard and humble, and see their earnings go into the coffers of the drones and speculators, but still work on for more.
>
> The working bees tolerate their drones for a time and support 'em, and put 'em out of the way for another set of the same sort. Folks don't do that, but I am not sure they oughtent to. The books tell us that the diligent labor of one man can decently support 8 people—provide 'em with good food and comfortable clothing, and its a fortunate thing that it is so, for they have it to do and more too, for those who actually work have to keep up the nabobs who don't, and supply 'em with finery and foolishness. My native bees don't seem to like these fancy hives, for some of 'em left 'em last spring and those that didn't, got eat up by the moths. Most all these new things have to be nursed up, and dandled up, and fondled up, and made fine and slick, and then they are put off on the fancy folks at fancy prices, and ever and anon a foolish poor man, like myself, gets taken in."

A German Apiary.—Mr. Alfred Neighbour, of London, England, attended the Austro-German Congress of Bee-Keepers at Cologne, and then visited Mr. A. Schlosser, at Ehrenfeld, who was awarded a silver medal at the Congress for his large collection of honey and splendid colonies of bees. Mr. Neighbour thus describes his visit to Mr. Schlosser:

> He is a fruit-grower on a large scale as well as an apiarist, and has a commodious house and garden. We were at once conducted to his bee-house, which is in the form of a cross, having 4 doors. Each one of the four wings projects nearly 11 feet, and is the same in breadth, which, adding the space of the interior, gives a diameter from door to door of about 33 feet. One-half the space of the interior is required for the necessary manipulations, the other half to the right and left is occupied by the hives. The first shelf is about 2 feet from the floor, the second tier is the same distance above, and the third is 2 feet higher. The hives are "Mehring's" twin-frame hives, and of much the same construction as Dzierzon's, except that the colonies are side by side, not end to end as is the case with the latter. Each shelf accommodates four twin colonies, so that the openings are cut in the boarding for eight entrances; thus there may be 24 colonies on each of the eight sides. This pavilion therefore holds when filled 192 colonies of bees. At the time I was there many colonies were away at the moors, consequently only a few were to be seen. The house is closely boarded and has a tiled roof. There is no admission of light except when the doors are thrown open. The hives open at the back, and are therefore easily manipulated without molestation by robber bees. Escape for

any bees that are outside the hives is found through the open door.

There is plenty of space to work the extractor in the center of the building. On inquiring if there was an apparent difference in the prosperity of the colonies facing the different aspects, Mr. Schlosser said that those exposed to the afternoon and evening sun, which induced the bees to fly out again, are placed in the most unfavorable position; but as long as the entrances are not exposed to the direct rays of the sun it makes no difference whether they face north, south, east or west, and the only drawback which he finds to his "pavilion" is, that when quite filled, the colonies are placed in too close proximity, which causes the loss of many queens in their return from their wedding flight.

Fairs and their Advantages.—The *Capital*, Topeka, Kansas, makes the following remarks on this subject:

> The inception of an agricultural fair puts in motion the best elements of farm life. It stimulates a laudable ambition with reference to the locality interested. If it is a township fair, the township at once has a reputation at stake; if it is a county fair, then the county comes in to be sustained; if it is a state fair, the whole state is to be represented; and, in every case, all individuals interested in the good name of the township, county or state feel concerned about the success of the fair. It has the effect to organize the working powers of every community.
>
> A fair is an advertisement for the community interested, and for every individual person who participates. If the general display is good, it gives a good reputation to the people represented; and in detail, every single exhibitor has opportunities for showing his own skill and success in his specialty if he have any. Every exhibitor meets hundreds of new acquaintances, and he learns to talk to them. He becomes a public man for the time being.
>
> This association with his fellow men, and in connection with his own vocation, affords to the farmer many opportunities for improving himself socially, and for acquiring information that would never come if there were no fairs. Their educating advantages are seen on every hand. Not only the farmer himself, but his family and friends are benefitted. They become partners in his gains, and share in his success.
>
> Fairs operate to make men and women better, larger hearted, more liberal; they give men larger and better views of life and labor; and better than all, they educate farmers and their sons and daughters to regard farm life more favorably. Many farmers look upon their calling as common, and without attractions. This is a fatal error with some. Fairs correct this evil. They elevate the standard of labor, and help make farming appear to be what it really is, the most independent, manly and honorable of callings.

Bees Injuring Fruit.—A late number of the *Western Rural*, has an amusing burlesque on the subject of bees injuring fruit. Of course, there could have been no more conclusive evidence presented to the Dutchman's mind that bees did really injure his fruit, than to have a swarm attempt to cluster in his apple tree. So, too, with many who most positively assert that bees destroy their grapes; they have found the grapes punctured or the skins cracked open, and have discovered bees in large numbers sipping the juice, and this is sufficient ground with them upon which to base the assertion that bees do injure fruit, and to petition their condemnation as a nuisance. Following is the squib:

> We once told a Dutchman of our acquaintance that bees did not injure fruit in the least, when he said that he knew better and gave the following argument to prove that bees do injure fruit: "Vonce a long vile ago I vent into mine abble orchard to glime a bare dree to kit some beaches to make mine vrow a blum budding mit; und vent I kits away up on de toppermost limbs, a hole lot of pees, pees vat come for honey gitten, two, tree, five dousand hundred of em game, ven I vos on de highermost pranches, und tey schting me all over so pad as never vas, und right before mine vace too, und I not know vere I am, so I vall town so high up, mit one leg on both sides of de bicket vence, und like to stove my outsides in. Vas you say, hey! Peas no steal de fruit, ven I ketch 'em at it?"

Swarming and Dividing for Increase.—The *Indiana Farmer* gives the following on the above subject:

> There are no certain signs as to just when a colony will swarm, so far as outside indications will show, more than the clustering of bees on the outside of the hive, and the hanging of pollen gatherers with the cluster outside instead of entering their hive, but by examining the frame frequently, watching the progress, one can soon tell when they are about ready to cast a swarm, and as soon as the queen cells are about ready to cap over is the best time to divide. Probably the safest and easiest way to divide, is as soon as they are ready, lift out the frame, bees, brood and all on which the queen is found; place this frame in the new hive, filling out with frames of comb or foundation, or if you do not have either, fill out with empty frames. Now place the new hive, containing the old queen on the old stand, moving the old hive to a new location. By this plan you throw nearly all the working bees where the most work is to be done in the new hive, and they will proceed to work the same as though they had swarmed naturally. But if the old bees had made up their mind to swarm and you had left a queen cell on the frames you had placed in the new hive, they will sometimes swarm anyhow, so you will notice to tear them down, if any exist before closing them up. The brood in the old hive hatching out very rapidly will soon make a good colony. The space in the old hive from where you removed the frame should be filled with comb, or foundation, for if an empty frame be placed there the bees will fill it with drone comb as they seldom make anything else while without a laying queen. In eight or nine days after dividing, all the queen cells except one should be taken out, so as not to cause after swarms.

CORRESPONDENCE

For the American Bee Journal.

Florida as a Bee Country.

W. S. HART.

On page 233 of the BEE JOURNAL Mr. T. S. Roys cruelly sweeps Florida clear out of the bee-keeping world with a few graceful turns of his pen. He also kindly shows the "great guns" the folly of their theories, and sets them right(?) "as to the cause of dysentery, diarrhea, etc." According to his statement and the date of his letter, he had been in this State nearly three winter months.

He says: "My observations have only extended to the peninsular portion of the State, and from what I know of that, would say, don't come here to go into the bee business. I am somewhat of a beeasticus myself, and know whereof I speak." If he has been to the peninsular portion of the State, he evidently has not been over it. He must have gone down a pine ridge and returned the way he came.

The writer did not feel competent to give a decided opinion of the honey resources of Florida until he had been here as many years as Mr. Roys had months and been clear around and pretty well over the "peninsular portion of the State." My opinion was then so well founded that I have as yet, after being here seven years, seen no cause to change it. However, I perfectly agree with Mr. R. in advising "all to look before they leap" into this or any new country for a permanent stay. Among the hundreds of letters that I have written in reply to enquiring bee-keepers, I do not think one can be found wherein I have advised selling a home in the North to come South, without first coming here to see how the country suits.

This is a peculiar country to the Northerner. It has more advantages and disadvantages than any State that I am acquainted with. Some people it will suit well, others it will not; but whoever comes here with a determination to stay, backed by energy and reasonable judgment, is bound to do well and accumulate property. And one way of doing this is by keeping bees in the coast counties south of the 29th parallel, where the mangrove is plentiful. Whether or not Mr. R. has ever been where the mangrove is to be found he does not state, yet from his writings I should judge not. He writes from Jacksonville, has been in the State nearly three months, and assures us that the bees have been gathering honey about his house for the past three weeks. California is a large State, and only a small portion of it is good for bee-keeping, yet 600 people give their time wholly to the industry.

Florida is also a large State, as is shown by the fact that the Okechobee Land Co., propose to drain a tract of rich land in the southern portion of the peninsula, larger by 1,000 square miles than the combined area of the States of Rhode Island, Connecticut, New Jersey, and Delaware, said land being outside of the settled portions of the peninsula, and until within a very few years never had been visited by a white man.

Again, Florida has nearly as long a coast line as all the Atlantic States together. A large part of this coast line lies south of the 29th parallel, and there is the bee country that I recommend. I do not think Mr. R. has ever seen any of this country. There is certainly room for more bee-keepers, as in all that country I know of but one man who gives all his time to bee-keeping. He has been here over a year, and now wants to buy land and make a home for himself and bees. How he succeeds can be seen by turning to page 194 of *Gleanings*, and reading a short communication from Mr. C. F. Hopkins. I believe that Mr. Hopkins looked some further than Mr. Roys, saw more and speaks better of the prospects here. After reading his note turn over one leaf, and on page 196 see a few lines from Mr. E. M. Johnson, that speaks well for the bee interest here.

As a guarantee for my reliability, and indorsement of my statements, I will say that the Agent of the State Bureau of Immigration issued a pamphlet asking for information in regard to sheep raising and bee-keeping in this State, and sent copies to parties all over the State. One was sent to me with a letter inclosed, asking for something more elaborate than the circular called for. I wrote an article and sent it with the suggestion that all the bee-keeping returns be put together in pamphlet form for distribution. Hon. C. Drew writes me that he is acting upon my suggestion and will forward me 200 copies as soon as done. I will send a copy to the BEE JOURNAL, and also to any other parties that write for them inclosing stamp.

In conclusion, I will say that at present, railroads are few in the aforesaid country, although without doubt several will be built within the year, and most of the traveling is done by boats and slow teams; so, if Mr. Roys knows more of this portion of Florida than the Puritans did of North America, he has traversed more of it than I think he has.

New Smyrna, Fla.

Farmers' Home Journal.

Rearing and Introducing Queens.

G. W. DEMAREE.

There is nothing connected with bee-culture that gives the apiarist so much satisfaction, as well as so many advantages, as the art of rearing and introducing queens. If he has a colony of bees that give poor results in the way of increase and production of honey, he can soon change the state of things by removing the unprofitable queen and introducing a better one in her place.

I have had queens that started in the spring with fair sized colonies that failed to get in working trim till after the main honey harvest was past, while other queens would fill their hives with bees and be ready and waiting for the harvest. To remedy these evils I commence to rear queens as soon in the spring as the weather will permit, in order that I may have good laying queens to take the place of such as do not give satisfactory results. If possible I would have a laying queen to introduce to the parent colony as soon as the first swarms issue. Managed in this way a colony will hardly miss the bees that are led off by the old queen, because they are furnished with a queen that goes right to laying and the hive is soon replenished with workers. This is made quite apparent when we take into consideration that the young generally hatches eight days after the old queen leads off the swarm and begins to lay at ten days old, which makes about eighteen days that the colony is without a laying queen. Really two or three more days should be added to this, because the young queens lay slowly for the first two or three days. These eighteen or twenty days sometimes make all the difference between a fair yield of honey and no surplus at all.

Doubtless some one will ask, "How do you rear queens?" Well, we older ones are apt to forget that our ranks are continually being filled up with candidates for bee knowledge, and therefore it is proper to go over what to us seems to be old grounds for the benefit of beginners, from time to time. Thus we "provide things new and old."

The methods employed by different bee-keepers vary somewhat, but the principle is the same. In order not to confuse the reader, I will simply give the plan I follow with satisfactory results. In this climate about the 15th of May is soon enough to commence to rear queens. Of course the state of the weather must govern these things.

I select a strong colony to rear the queen cells, and proceed as follows: I open the hive which contains the queen I wish to breed from, and from one of the center combs I cut a piece about 2x3 inches, containing eggs and larvæ just hatched. This can be known by a small drop of white creamy looking substance at the bottom of the cell. I prefer to have some of the eggs just hatched, because I thereby save about three days' time, as it requires three days for the egg of the honey bee to hatch. I now move the colony, which I have selected to rear the queen cells, from their stand and place an empty hive in its place, provided with some empty combs or frames filled with foundation.

Now, cut a slot in one of the combs, near the corner and running parallel with the top bar, about a half inch wide and eight or ten inches long. As bees are decidedly pleased with an opening just below the cell, I usually cut notches in the lower edge of the slot like saw teeth; but this is not essential. I now cut the piece of comb containing the eggs, etc., as above described, into strips and fit them into the slot. If they do not fit close enough to stay in place, they can be secured by some slender wooden pins. I now open the hive that I have removed from its stand, and look up the queen and place the comb on which I find her in my comb box, or any other safe place. This I do to prevent a possibility of getting the queen into the new hive, which would certainly defeat the object of my labors.

I now take out one of the side combs containing honey, but no eggs or larvæ, and set it in one side of the new hive, and set the comb containing the eggs (I have supplied) next to it, and then finish out with empty combs or frames of foundation as above stated. I now shake the bees off of two or three combs from the old hive into the new one. This gives the new hive a division of the young bees, which is quite essential to cell building. The bees are now covered with a quilt, and the hive closed up. The queen is returned to the old hive, and the latter is given a new stand. The old bees will nearly all go back to their old location, and go to work like a natural swarm.

I keep an eye on the new colony to see how they progress in cell building. On the eighth day I examine the cells to see how many there are, and then proceed to form nuclei to suit the number of cells. This I do by taking two combs with bees adhering (be sure the queen is left at home) and setting them in an empty hive, at one side hanging in a division board to curtail the size of the hive. These nuclei are made from any strong colonies. In one or two days after the nuclei are made they will have realized their queenless condition, and will be ready to accept the cells.

We now open the queen rearing hive and cut out all the cells but one, or as many as we want, if there should chance to be a surplus. A bit of comb should be left adhering to each cell, and they must be handled carefully. Each nucleus is provided with a cell. This I do by taking out one of the combs and cut a hole in it, and fasten the cell to the edge of the comb (inside the hive) with a wooden pin inserted through the bit of comb adhering to the cell, and into the edge of the comb. The bees will finish up the job. The young queens will hatch in two or three days, and will go out to meet the drones in five or six more days, and at about ten days old they will commence to lay eggs. You now have laying queens at your disposal.

Christiansburg, Ky.

For the American Bee Journal.

Care of Comb Honey—No. 2.

G. M. DOOLITTLE.

Having our honey placed in a warm room, as recommended in my last, the next thing which will need our attention will likely be the larvæ of the wax moth, in order to keep them from damaging our honey, for I have yet to see the pile of 1,000 lbs. of comb honey which does not have more or less of these worms or larvæ upon it, after it has been stored in a warm room for 2 weeks. Some of our bee friends tell us they are never troubled in this way, but however strong my hopes may be, as I place my honey in the honey-room, that I shall, like them, be exempt from that nuisance "moth worms," still I have to eventually conclude with such hopes never realized, for the worms always put in an appearance. After the honey has been away from the bees about 10 days, if we inspect the cappings of the honey closely, we will detect little places of white dust resembling flour upon the surface of the comb, and usually most abundant near the bottom of the box. Now, although this place may not be larger than than the eye of a fine needle, still it tells us for certain that a tiny worm of the wax moth is there, and that unless it is destroyed, it will destroy more or less of the nice white comb which encases our honey.

While in the city of Syracuse, N. Y., a number of years ago, I saw boxes of honey which had worms in them as large as a slate pencil, and an inch or more long, and although they had nearly denuded the honey of the nice white cappings to the cells, still I could not make the groceryman believe the worms lived upon the wax. Such a spectacle soon disgusts customers, and injures the sale of comb honey very much.

If, after several examinations, you fail to find such little white, flour-like places, you need be very thankful. If you should find these, the next thing is to sulphur your honey. To do this I get an old kettle and put some ashes in the bottom of it so there will be no danger of fire resulting from the heat from the coals, which are to be placed therein. When I have the kettle thus prepared, I take it to the honey room and pour sulphur, which has been previously weighed, on the coals to the amount of $\frac{1}{4}$ lb. to every 75 cubic feet contained in the room; when the kettle is quickly pushed under the pile of honey and the room closed, you will have to be spry, or you will get some of the fumes thereof yourself, which is not very pleasant, I assure you. I now go and look in at the window, to which the few flies which chance to be in the room will come, hoping to escape their doom. As soon as I see the last fly is lifeless, I take out my watch, and, after the lapse of 5 minutes, I open the windows so as to carry out the smoke as soon as possible, for if allowed to settle on the combs it will turn them a greenish color, which damages the sale of honey very much.

If more honey is brought into the room this is also watched, and when the marks of the worms are seen on these the same operation is repeated again, and so on till I am sure the honey leaves my hands without danger of these pests making an appearance after it has been placed upon the market. After this is done, the next thing I do is to glass the sections, as most of our Eastern markets still demand their honey glassed. In order to have my glass cut accurate the narrow way, where it goes between the projections on the sections, I buy the glass cut in strips 6x30, and then place these strips in a box similar to a miter box, using the diamond to cut the glass in a similar way to which a saw is used in cutting lumber in such a box. Thus I have each glass just alike and exactly as I wish it. I once bought a lot of glass cut 5x6, because they told me at the factory that it should be cut accurate the 5 way, but upon getting it I found that accurate meant all the way from $4\frac{7}{8}$ to $5\frac{1}{8}$. As it was getting late, I was obliged to use it, but I had better have thrown it entirely away, for in crowding the larger glass between the projections to the sections, the combs were cracked loose from the sides of the box, causing it to leak and making it liable to break down in shipping. Thus I learned a lesson, which, though costly, has perhaps been a benefit to me. Since then I have cut my own glass the narrow way, and have learned by experience that to be just right the glass should be cut 1-32 of an inch narrower than the box, thereby letting it go between the projections without crowding. After the glass is cut, it is washed so clean that it fairly shines, when it is ready to be placed on the honey, which is done by bending up the tin points which were previously driven into the end pieces of the section at the time the sections were made. After bending up the tins, drop in the glass and bend them back over the glass, when the work is done.

Now scrape every bit of propolis and dirt off the outside of the box or section, so it will be as clean and nice as when first made, and it is ready to be crated. This point of scraping off the propolis is overlooked by some, for I have seen sections sent to market so daubed with propolis as to look untidy and injure the sale of it. If we wish to get a good price for our product and increase the demand for the same, all these little things should be looked after, for they go toward spoiling the sale of our crop, or enhancing the value thereof, as the case may be.

Either before the honey is glassed or afterward (generally before), I grade it, making three grades of it. In the first grade I place all which is perfect or nearly so, and such as is termed A No. 1. In the second grade is placed all of my combs which have been soiled by having a few cells of brood or pollen in them, and also all which are light in weight or are not fully capped. In my third grade I put all which is off-color, such as buckwheat, or a mixture of light and dark honey together. The grading of all kinds of products pays well and that of honey especially. My next will be crates, crating, and hauling to market or the railroad.

Borodino, N. Y.

London Journal of Horticulture.

Cultivation of Plants for Bees.

FRANK R. CHESHIRE.

That the place occupied in Nature by bees in general, and the honey bee in particular, is, as a rule, not understood even by the bee-keeper himself, is certain; and he in consequence is often led into expenditure which he would not otherwise have incurred, while he is not unfrequently met by disappointment which a little greater knowedge would have prevented. Let me in order to make this clear explain that the business of the bee as a honey and pollen gatherer, although most interesting to us as bee-keepers, because upon this our profit rests, is after all but the least part of the work which the insect accomplishes in the great and wonderous scheme of Nature. The bloom secretes honey, but not for itself; it is a gift to the honey gatherer—nay, rather a payment, for the bee in its visits to secure food for itself and young unconsciously performs an act which completes the object of the flower's existence, and receives the honey as a compensation for its service. This subject is so full of marvels and is so various in its details, that anything beyond an illustration or two I cannot at the present attempt. Speaking broadly then, honey-bearing flowers have anthers which shed pollen, while at a certain period a central organ or organs of the bloom (stigma or stigmata) open and wait for pollen being placed upon their surfaces. When this occurs a pollen tube, as it is termed, grows down from the pollen granule to the ovary and enters the ovule, which henceforth passes into a new phase of its existence as a fertilized developing seed. Without this placing of the pollen granule upon the stigma the bloom remains expanded for an unusual time, but at length fades, leaving no seed behind. The placing of the pollen granule upon the stigma can hardly be accomplished without the intervention of insects, for almost all blooms present some curious correlation of parts which makes it difficult, or even impossible, for its seed to be fertilized by pollen it has itself produced. Cross-fertilization and not in-breeding is the law for a reason amazing by its beauty. This crossing is secured by means which are legion, but amongst which two are the most common—viz., the anthers ripen first, and not till all their pollen is gone does the stigma become receptive (protandrous), or the stigma is first produced, the anthers not ripening till after an opportunity for fertilization by other pollen has been given (protogynous).

It is a general rule that honey continues to be secreted till fertilization takes place, when a diversion of nutrition occurs, and with the ceasing of the honey the petals, nature's colored flags hung out to attract the insect visitant, drop. The netting of the greenhouse or conservatory against insects is of course right, because here bloom and not seed is the object desired.

The scattering of Clover and borage seeds, and such like, in waste places on railway banks and disregarded corners, or in our grounds if extensive, is very useful, because here we conform to a natural instinct which we neglect if our blooms are made to nod their heads in the very face of the bees as they start from the alighting board. I have been told not a few times by disappointed purchasers of seed packets potentially containing whole supers of honey that the plants represented to be so suited to bees were quite unvisited. I hope I have now made the reason apparent. This year, in watching my cherry trees about 70 yards from my hives, I found but few yellow-banded bees amongst them in comparison with the number seen on those of a neighbor at four or five times the distance. It is thus by wide diffusion that the multitudes of bloom get in the main their needed attention, and that their honey is not provided in vain.

London, Eng.

Canadian Farmer.

Management of Bees in Spring.

S. T. PETTIT.

Allow me to say one word with regard to the management of bees in spring. Some few prominent bee-keepers with more zeal than wisdom, recommend feeding bees at this season of the year, large quantities of sugar syrup, so that when they begin to work on clover, the hives are already full of syrup, and consequently the first, and in fact all the clover honey must go to the surplus boxes. Now, all this sounds very nice, and possibly some beginners may follow such a course until a little more knowledge on the subject convinces them of the folly of that kind of practice. I will give my reason why not to do so.

When the surplus boxes are put on to make room for the queen, the bees will usually move a large part of the stores from the brood chamber to the surplus apartments, and thus you see you have an adulterated instead of a pure article for the market. But it has been said that a little sugar won't poison any body. Very true, it will not. But to do so, will poison your conscience; lower yourself in your own estimation, blast your reputation, and injure the honey-producing interests of the country. The people want a pure article, and will buy it and use it liberally, when convinced of its purity. Every business man, or nearly so, to whom you offer honey, will ask you if it is pure. Now, if there is the least taint of sugar about it you must say so or lie. But if you begin to explain that there may be a little, etc., why, the game is up and you are out, for no respectable dealer will touch it, unless you can vouch for its purity. True, you could make a big report at the close of the honey season; but I am proud to believe that no Canadian bee-keeper would feel very happy over a crooked report, however large, consisting of sugar and honey.

Let us most religiously see to it that Ontario honey shall stand extra No. 1. in the markets of the world. Work hard and make your honey crop as large as possible; but never sacrifice quality for quantity.

Belmont, Ont., May 4, 1882.

From the Bienenzeitung.

A Peculiar Incident.

T. ZINCK.

I am always pleased to look at queen bees, but Tuesday, the 12th July last, formed an exception. On that day, between 5 and 6 o'clock in the afternoon, I discovered a queen in my garden about fifteen paces from the place where my hives are kept, resting on the ground and surrounded by a cluster of bees, to which my attention was directed by a number of workers hovering over the queen. The bees behaved exactly as they do when a swarm looses its queen, but I was quite certain that no swarm had issued from any of my colonies. I at once thought of a colony from which the queen had been removed twenty days previously. In this hive a young queen appeared on the 7th July, but the bees did not tear away the superfluous royal cells until the 10th July. On that day the weather was most unfavorable, nor did any drones venture out of their hive on the 11th, but I confidently expected the young queen of this colony to become impregnated on the 12th July, which was a lovely day. I picked up the poor queen, and finding that one of her wings was dislocated I put her into a queen cage, which I fixed inside the hive above the comb bars. The bees surrounded the cage joyfully; and as the queen did not try to get away from them, but evidently allowed herself to be fed, I liberated her a few minutes afterwards, and I soon saw her walking about among the bees.

It had to be ascertained now whether the queen was incapable of flying when she left the hive or whether she had met with an accident after the act of impregnation. Unfortunately the former turned out to be the case, for on the following day (Wednesday) I found her again in the garden at the same time running backwards and forwards alone, but some workers were hovering over her again, which attracted my attention. I picked up the queen, who was now minus one of her wings, and allowed her to enter the hive by the entrance. She was again well received by the workers.

On the following day (Thursday) I noticed nothing unusual in the morning, and in the afternoon I was obliged to leave home. When I returned late in the evening I did not think it necessary to examine the interior of the hive, as the outside presented its customary appearance. I looked for the queen on the ground in the garden, but she was not to be found there. At half-past seven the next morning I paid a visit to my colony whose existence was in danger, and as soon as I opened the hive I knew at once that it was without a queen. I found the queen on the ground in the garden for the third time, surrounded again by a few workers. Of course she had not left the hive the same morning, but the previous afternoon, which accounted for the colony being in such an excited state. Knowing that it was impossible for the queen to become fertile on account of her being unable to keep on the wing, I placed her in a queen cage among the bees, and a few hours afterwards I introduced a fertile queen in her place.

Though this is a case of rare occurrence, nevertheless it will show that when a queen leaves the hive on her wedding trip she remains in communication with her colony by worker bees which accompany her. This was the interesting part of the affair, which inclines me to hope that queen bees do not so easily lose their way and perish, as is often stated.

It was the first time that I lost a young queen, and in this case it was, perhaps, through some fault of my own, as I performed some operations on the colony between the time of the queen leaving the cell and her wedding excursion. The exterior of the hive was, indeed, not interfered with, but I made some alterations in the interior, during which the wing of the queen may have become damaged by the workers or otherwise. The queen certainly appeared faultless to me when I saw her immediately after she was hatched.

"One misfortune seldom comes alone," and this saying seems to be true with regard to bees also. Last summer this same colony killed their own queen—the best one I possessed—after I had deprived them of all their honeycomb, which was replaced by empty combs, of which I had a sufficient number from previous bad times to enable me to make artificial swarms. When I gave them a new queen and liberated her after two days' confinement the bees immediately attacked her, and would have killed her if I had not rescued her from their fury in time. After this a royal cell was inserted, which was very late in hatching, and when at length the queen made her appearance she first laid drone eggs only, but afterwards she also produced workers. She did not prove very fertile, however, so that her population increased but slowly this spring. I therefore removed the queen, leaving the colony to rear a new one. What happened to this queen has just been related. The new queen having been accepted I trust all its troubles will now be at an end.

Kleinheilbach, Germany.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Aug. 10—Maine State, at Harmony, Maine.
Wm. Hoyt, Sec.

Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.

Oct. 5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Western Michigan.

[We give this week the remainder of the proceedings of the Western Michigan Convention, which had not arrived at the hour of going to press with our last issue :—Ed.]

Italianizing an Apiary.

Mr. Robertson. I would start a nucleus for each colony, and save the time of the old queens until the young queens were ready to use. The cells should be grown in strong colonies, and only the best stock used. I use a lamp nursery, in which the cells are placed to hatch, and drop the virgin queens into the nuclei within a few hours after hatching. In introducing fertile queens, I generally use the caging process, though I have succeeded well with other methods.

Mr. Cobb. I use an introducing cage of my own, which I fasten to the side of the comb. After 48 hours I make a hole through the comb into the cage, and return it, leaving the bees to liberate the queen. Nuclei should be started 24 hours before putting queen cells in them.

Mr. Kilburn. It would endanger the life of the queen to disturb the bees within a week after introducing. I favor the mode of introducing used by Mr. Cobb.

Mr. Robertson thought one method infallible ; that was to place the queen on combs of hatching brood. Remove the colony, placing the hive, containing the queen to be introduced on the old stand. The bees returning from the field would join the new queen, afterward the rest of the swarm could be given them, taking care, of course, to destroy the old queen.

Mr. Kilburn thought this would succeed only when honey was being gathered.

Artificial Swarming.

Mr. Robertson, in answer to a question, said he practiced artificial swarming entirely. He seldom divided, but preferred to make up a good swarm, from several, and give them a fertile queen.

This subject was further discussed on Thursday afternoon. All, or nearly all, favored the method, of making up swarms practiced by Mr. Robertson.

F. S. Covey dispensed with handling the queen cells, and obtained fine queens in this way ; he made up strong swarms of young bees and brood, dividing into nuclei when queen cells were old enough, leaving one good cell in each hive. He then exchanged places with strong swarms. The majority were found to favor natural swarming in practice.

Cyprian Bees.

Mr. Cobb said he had tried the Cyprian bees one season. He considered his opinion rather premature as yet ; had found them a little more inclined to sting than Italian bees, particularly so when no honey was being gathered. Felt like discarding them at first, but found some good points. He had found them more prolific and better honey gatherers than the Italians. His Cyprian colonies already had drone brood. He had an imported queen.

Mr. Robertson preferred the Italian to the Cyprian bees on account of their temper.

John Slabbekoorn. I have found them much crosser than Italian bees.

Mr. Kilburn. While they will breed a little faster, they have no other advantage over the Italian bees. As honey gatherers he has found them no better. They cannot be managed with smoke. They are more inclined to rob, and will defend their hives with more spirit than will Italian bees.

Mr. Cobb. I have found them manageable with smoke. I agree with Mr. Kilburn that they are more inclined to rob and will defend themselves better than Italian bees.

The President advocated the improvement of the Italian race, by careful selection and breeding from the most prolific.

The question was asked, "Is this extra prolificness desirable ?"

Mr. Cobb thought that where white clover was the main dependance, extra prolificness was desirable.

Mr. Kilburn and others had found a cross between the Italian and Cyprian races produced very good bees.

The following paper was read by Mrs. Jennie Walcott.

"Thoughts on Bee Keeping."

That bee-keeping is a business or profession as much as agriculture, horticulture, architecture, or any of the various pursuits followed by mankind, none that have kept bees a few years will deny, and our success in this branch of industry depends entirely upon our natural and acquired ability. By acquired ability, I mean the amount of reading and careful study we have given this pursuit in its various bearings. It is unlike most trades where one serves an apprenticeship of several years before being considered capable of managing for himself. The bee-keeper must combine theory and practice in order to make the business pay. I have for 4 or 5 years been somewhat acquainted with the little busy workers, but for the last 2 years I have tried to study their natures and habits, and feel as yet I know but little about them.

In regard to wintering, I am satisfied upward ventilation is essential. Our bees were packed in chaff on the summer stands last November, all in good fair condition. In the cover of one hive a ½ inch hole was bored and a small tube inserted which came up through the chaff. Upon examining this hive in March, we found the colony strong, bees having that glossy look characteristic of health. The bottom board was nearly clear of dead bees and the hive presented the best appearance of any in the yard. My opinion of wintering is, first a strong colony ; plenty of stores ; a cool, dry atmosphere.

The problem with us is how shall we obtain the most honey ? which I presume is the principal object with most bee-keepers (while each has his own particular way of managing his bees). Inventors and mechanics are constantly at work on improvements, thereby greatly facilitating the labor of the bees. I have to confess that our surplus account does not come within a long way of L. C. Root and some others. One man claims 600 lbs. per colony.

My opinion is the queen has much to do with the activity of the colony. Two colonies have stood side by side in our apiary ; one colony produced more than as much again honey as the other. I think in obtaining queens this should be one of the ruling traits. We have tried various ways to make these lazy bees go to work, but without much success. I think the fault was with the mother.

Another thought concerning the sale of honey ; ought we not, as bee-keepers, to obtain a uniform price ? Competition is the life of business, is the tradesmans theory ; yet may we not in justice to ourselves, and kindness to our brother bee-keepers, be conformed to a general price for our produce. In union there is strength. A really nice article will always sell more readily in the market than an inferior one, but if one dealer sells his honey 2 or 3 cents cheaper than the average price, it soon produces confusion in the market. Our home market is much better than the market East, West, or South, according to bee papers, and I hope it may still continue so. I think it will if we are careful to offer only a good article, and expect a good price for it. In regard to comb foundation, or natural comb, we say give us the natural comb. Not ignoring this noble invention of foundation (many times have we mentally thanked our brother across the ocean for this wonderful help in comb building), but we think its place is in the brood chamber. We save every small piece of natural comb, and fit them nicely together, and place them in the hive, the bees soon fix them solid and we have another comb for the extractor. One more thought; may we not add to the general interest of the meeting if each one write a short account of this summer's experiments, both successes and failures, thereby being a mutual benefit to us all; lastly, may we not, as bee-keepers, greatly increase our facilities for honey producing, by planting small basswood trees by the road side and along line fences, and by sowing those seeds, and furnishing them gratis to our neighbors, which yield honey. Buckwheat, which is useful as a grain, and many other plants which amply repay us with the sweet nectar they furnish.

Mr. Robertson preferred foundation to natural comb. Used the Dunham—thick for brood combs and thin for sections. He preferred to fill the sections with it.

Mr. Kilburn preferred the Vandervort foundation on account of natural shape of base.

The President used foundation in sections only for starters. Had found the bees would sometimes prefer foundation, and sometimes natural comb, when placed alternately.

Mr. Cobb found comb honey sold best in 1 lb. sections, and the extracted best in glass jars; but thought buyers would learn to take well to candied honey in tin pails.

Mr. Kilburn recommended the tin cans for honey; the smaller sizes making a cheap and salable retail package, and the large cans more convenient and safe to ship in than barrels, as honey was hard to hold in barrels.

Mr. Robertson agreed with Mr. Kilburn, that honey was hard to hold. He used pine kegs uncoated, and considered them much better than oak. Spruce kegs were advertised; he liked the idea, but had not used them.

Mr. Covey thought bees were made more irritable by using too much smoke; he would give them a little, and proceed at once with his work.

The President said they should be given a little time to fill themselves with honey.

Mr. Covey. Time is money in the honey season. He thought they were more easily handled while engaged in filling themselves.

Mr. Robinson. Some bees could be handled well without smoke; others would be cross in spite of smoke.

Mr. Slabbekoorn thought the quality of the honey they were gathering made a difference. His bees were very cross while at work on seed onions.

The President thought that bees were aroused by the actions mostly. A colt of his could crop the grass close to the hives without getting a sting.

W. McCordan complained that the bees were much disturbed by loosening the frames in opening his hives.

Mr. Kilburn said the use of tin corners, with metal rabbets would prevent all sticking, but he preferred to use the common frame, with the metal rabbets.

The President carefully pried the frames loose with some instrument before handling, and had no trouble.

The secretary used a marline spike for that purpose.

Providing Water for Bees.

Mr. Robinson thought this was important. They would accept water many times very thankfully.

Mr. Covey. Many bees were chilled and lost in the spring while gathering water in cool weather; believed they should at such times be provided with water at home.

The President. Bees are supposed to prefer brackish or salt water.

Mr. Cobb gave them water made a little sweet, in feeders, to keep them at home. It was easier, but not as effective to feed water in the yard.

The President had fed bees water while in the cellar, with good results.

Mr. Covey had a swarm become very uneasy in the cellar and finally die. On examination he found they had considerable brood, and thought the want of water had made them uneasy.

Clipping Queens.

Mr. Cobb said, in his early experience he had a good deal of trouble with absconding swarms; he now clipped all his queens.

The meeting adjourned to meet in the same place at such time in October or November next as the officers should elect.

WM. M. S. DODGE, *Sec.*

Maine State Convention.

The Maine Bee-Keepers' Association met at Foxcroft, Thursday, May 11. As Mr. Torrey was not present with his essay upon wintering bees, we passed to the reports. Mr. French reported a loss of six colonies out of forty-one, during the winter, wintered partly in the cellar, and partly out of doors, packed in chaff. Mr. Silver lost four out of thirteen on their summer stands, without any protection.

Mr. Crockett wintered seven without any loss, he builds a house that will hold three or four hives, and uses chaff for packing. Mrs. Vaughan lost four out of twenty-six, always wintered in the cellar without any loss, until the present winter.

President Additon said his bees had wintered well, but some of the queens were found missing this spring. Mr. Brockway and others had wintered without any loss.

In the afternoon a paper on "Bee-Keeping in Maine," prepared by I. F. Plummer, was read, followed by discussion, and numerous questions were asked and answered. Voted to hold the next meeting at Harmony, Somerset Co., August 10, 1882.

WM. HOYT, *Sec.*

☞ The Northwestern Wisconsin Bee-Keepers' Society will meet in La Crosse, Wis., June 9, 1882, in the City Hall. A good attendance is desired, as arrangements have been made for articles from practical apiarists.

G. J. PAMMEL, *Sec.*

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

SELECTIONS FROM OUR LETTER BOX

Hunting Wild Bees.—Please state the plan of hunting bees. There are several bee-trees in my neighborhood, if they could be found early enough to transfer. I have 1 colony of bees packed in chaff on summer stand. They are doing nicely. K. J. LEE.
Carpenter, Iowa.

[It will take more space than we can spare to explain the whole *modus operandi*. We can supply you with a copy of A B C, which gives a very instructive article on the subject.—ED.]

All Swarmed in May.—Last fall I packed 5 colonies on the summer stand; all were strong and in a healthy condition this spring. One swarmed on the 3d of May, and the others have since, the last coming out on the 28th. I anticipate they will furnish 100 lbs. of section honey in June. I think they are doing well considering the weather. L. J. MCKINNEY.
Burlington, Iowa.

Barberry.—This morning finds the ground white with snow, and bees are housed; but they are in fine condition, considering the weather. We have hope yet, but it looks to-day like it would be all hope. Inclosed I send you a specimen of a shrub that the bees appear to like very much. It grows about 10 feet high; commences to bloom about the first of May, and blooms through June. Can you tell me its name? F. J. SAWIN.
Kirkwood, Ill., May 23, 1882.

[The shrub is the common barberry, often cultivated for its pleasant, acid fruit, but more often for ornament. It is a native of Europe, whence it was introduced at an early day, and is now found throughout our country. It, however, rarely escapes from cultivation to become distributed in a natural manner. Insects of many kinds visit its flowers for the honey, which is secreted in considerable quantity. Mr. Sawin is probably mistaken as to the length of time the bush continues in bloom, but a quantity of it would materially aid the bees during its season. No one should fail to observe the movement of the stamens of the flower when these are touched near the base, as by an insect's foot or the point of a pin. It was formerly taught that this wonderful property was for the purpose of putting the pollen on the pistil of the same flower. Now we know that its purpose is to secure the distribution of the pollen from flower to flower through the aid of the insects which the nectar attracts. Watch them.—T. J. BURRILL.]

Worker Bees in Queen Cells.—In overhauling a colony that had cast a swarm, I found about 15 queen cells capped over. I cut all of them out, as I wished to make use of part, and opened the rest to see how far they were advanced. In the first one I opened I found an old, dead worker bee; the next one—a very fine looking cell—found another worker bee, but fully alive, with its head all besmeared with the food in the base of cell; the rest of the cells all had queen larvæ in different stages of development. How did the worker bees get in the cells, and what caused them to be capped over? Please give answer in Semi-Monthly. Bees in this section are strong, but have very little honey in the hives, and are killing off drones. Out of 16 colonies I have had only 2 swarms. During bloom of wild cherry and locust, bees were not able to fly, white clover is coming in slowly, and I think it will remain slow business, as there seems to be very little, only able to find it in patches here and there, and our only salvation seems to be fair weather during linden bloom. T. MUEHL.

Rhineland, Mo., May 20, 1882.

[The capping of worker bees in queen cells is of such seldom occurrence that it would be difficult to account for it, though we might account for rearing a worker bee, or malformation, in a queen cell.—ED.]

The Honey Season in California.—Bees are now booming on blue sage and fruit bloom, and good help is very scarce. They are doing better than last year. I never had hives filled up so since I commenced bee-keeping, in 1877. I lay it to comb foundation and a choice race of working Italian bees. Some of my queens are so dark that they look almost like black bees, but they give me good workers, all three-banded and uniformly marked; but they do not take so well as the lighter ones. I manage to breed from them annually and select. I have a very good cross from different breeds, and have several queens that throw as fine drones as I ever saw, and the queens are prolific, while the workers are workers. One in particular filled a 10-frame Langstroth hive in 2 days so full that the queen could not find an empty cell. Since our last rain about a week ago, the weather has been fine and warm, and the bloom is profuse. The yard smells of it at a distance from the hives, and it seems like somebody's nice kitchen on cake-baking day. The honey comes clear and fast, and when I see a cluster commencing at the entrance I extract, and take at least 6 out of 10, and often 8, and sometimes the whole 10 frames to empty. I find the honey about 11 lbs. to the gallon. Of course not fully ripe, as I have to extract to make room in the brood apartment. Some hives have 20 frames, and some have two tiers of sections, on some the first being full of honey. The queen did go into the sections until this week, but they crowd her out of them now. I would like to have some one to explain if they possibly can, a point not in the books. Last season the weather was cool and bad for rearing queens. My queens quit laying Oct. 15; I found no eggs in the hives from then until Jan. 1, 1882. I examined, as I thought, thoroughly. Queens seemed to be all right; noticed in some hives young queens appearing where the old queens were superseded. They ceased laying; tried to rear queens in September and October, but had some drone layers which did not lay until January, and I killed them when I found what they were, except one very fine looking queen. In the fall my bees went to the neighboring wine-presses and got drowned by thousands, and were reduced accordingly. Some colonies were small through the winter, and mostly all old bees in the spring; I kept reducing the hive with division boards made expressly. The young queen (drone layer) quit and had to be replenished occasionally, to keep her along, but did not last. All my old queens had their wings clipped, so I knew when a queen was superseded. I dared not interfere with the young queens until they had laid, and had a good card of eggs and sealed brood, though I marked when the eggs first appeared. Now the strangest part appears—the brood appeared to be worker brood, and so proved, and pure Italians. Explain that if you can. My idea is, the queens remained dormant until spring, when a few stray drones appeared, and the queens got fertilized from them, as I aimed to rear drones early, but the bees were not so minded and were not early. She must have been fertilized late in the spring, or after January. You may be sure I was agreeably surprised, and now some of those queens have their hives full of bees and are as prolific as any as far as I can see. I saved over 100 combs of foundation all winter, besides a lot of full ones. The foundation was all built out. They were not touched by the moth and are all in use now. The full combs I uncapped and gave to the bees as they needed it, and am extracting now. The honey I gave was dark, from goldenrod, and the bees used it in breeding hives full of bees, and the extracted honey is clear and fine, all No. 1. The air is full of bees. So far I am ahead of swarming, though they have plenty of queen cells. J. D. ENAS.

Napa., Cal., April 30, 1882.

Prevention of Swarming.—I am having trouble with many colonies which I, two weeks ago, prepared for storing honey in top boxes. After following the directions of Mr. Doolittle (whose articles I consider of more practical value than any others I have read), by adding bees and brood to a colony, and then putting on top boxes. The bees commence working beautifully in the top boxes, and then send forth a large swarm, thus depopulating the hive. All work in the top boxes ceases at once. Now, if I wait for the hive to fill up again in the natural way, the honey harvest will be over before the bees commence work again in the top boxes. What is to be done? I have about 80 colonies, with a fine prospect of a good yield this year.

JOHN W. HINSDALE.

[Use the extractor very freely in the lower story and destroy queen cells, then clip a wing of the queen. In fact, we cannot too highly recommend clipping a wing of the queen when the boxes are put on, whether you find queen cells or not, and regardless of symptoms for swarming.—ED.]

Wild Honeysuckle.—I have had to feed my bees ever since fruit blossoms closed off. I send you a leaf and flower of what I call a wild honeysuckle; what is it? From the long sheath of its flower I supposed the bees would not be able to reach its honey, but I find they manage to split it down, or make an incision near the bottom, and work upon it from morning till night. I also find the spirea opulafolia a good honey plant.

WM. MAXWELL.

Edgerton, Kas., May 23, 1882.

[This is, as Mr. Maxwell calls it, a wild honeysuckle (*Lonicera parviflora*). It prominently differs from two other species, probably found native in the same locality, by its less rank growth and by the shorter tube of the flower. The common name suggests the quantity of nectar secreted and lodged in the bottom of the tubular corolla; but this nectar was evidently not intended to entice the honey bee to visit the flower, the tube being too small for entrance, and too long for this insect's tongue. The manner in which bees do obtain the sweet fluid, as related by Mr. Maxwell, and as often before observed, does show the surprising intelligence of the insect. It is scarcely possible that what is called "instinct" has anything to do with the cutting of the base of the tube from without. Simply crowding down the throat might teach them to split the corolla, and gaining access in this way at times might tempt them to try many other methods. Or we may not be wrong in attributing sense enough to the bee to know what it wanted and to devise at once a process of securing it. At any rate, the lesson is a good one and ought not to pass unheeded by any one who desires to understand the facts of nature, or to be mentally stimulated himself to thought and pleasurable inquiry. As the plant blossoms profusely for some weeks, and secretes an abundance of nectar, *educated* bees may considerably profit by its presence.—T. J. BURRILL, Ill. Industrial University.]

Use New Honey Packages.—In this part of Nebraska as elsewhere, spring is lagging behind very disagreeably for the bee interest. The greater portion of the weather so far has been cool and chilling, and the bees apparently being anxious to get out, venture forth when it is so unfavorable that they perish by hundreds, and some days even by thousands; but we are feeding a little to stimulate breeding, and thereby our colonies are gaining in strength. notwithstanding the unfavorable weather. Bees passed through the winter in good shape in this locality. The following are some of the reasons why Eastern Nebraska is a favorable place for bee-keepers: About April 1st cottonwoods are in bloom; April 10th to 30th wild and tame fruit, box elder, and, I believe, soft maple. During the fore part of May wild flowers begin to make their appearance, and keep coming more and more until frost; April 15th to 25th willows are in bloom. About this time, if we have attended to business, rape will begin to bloom, which will carry us into clover; then about July 1st, vervain, which grows quite extensively along the streams, gets up a terrible excitement among the little bees, and about July 10th heartsease begins to bloom, which sends everything booming until checked by late September frost. You will readily see that we have fully two months in which to build up our colonies and get ready for the honey harvest. Would you recommend putting extracted honey in old whisky barrels, or would one extreme flavor disagree with the other extreme?

M. L. TRESTER.

Lincoln, Neb., May 18, 1882.

[By no means use old whisky barrels, nor any other second-hand packages for putting nice honey in. If intended for market, you cannot be too careful, nor too tasteful, in the selection of kegs. Any flavor which is not that of pure honey will be found detrimental. We recently sampled some honey which had been sent to a dealer in this city, and put up in a keg that had contained maple syrup. The honey was badly tainted, and both the flavor of the honey and of the maple syrup were so badly neutralized, that several experts unhesitatingly expressed the opinion that it was more sorghum than honey, through some mistake of the shipper, who is one of the most conscientious men in the country.—ED.]

Warranted Queens.—Spring has seemed to come at last. Bees are now at work on apple blossom finely. I have lost several weak colonies from dwindling, owing to the cold weather, but hope that now we will have some good weather. It rained all last night, and is raining still. If it clears off warm I shall be glad, as we needed the rain. I ordered 4 warranted queens a year ago the last of last April. They were promised to be sent me the first week in May. I received one of the four which was improperly mated. I could not get the rest until the middle of August, and, as 3 of them were put into hybrid colonies, I could not tell for certain how they were. I find this spring 2 of them produce about one-third black bees; one has bees pretty good. One I put into an Italian colony, and knew last fall that she was not pure or purely mated; but it had got to be too late in the season to replace her, so I said nothing, nor have I yet to the breeder. Should he make them good this summer? Or should I lose my money? Answer in BEE JOURNAL.

A. C. BALCH.

Kalamazoo, Mich., May 27, 1882.

[If ordered in reasonable season, and received too late to test last fall, they should be replaced this spring; but if you had ample time to determine their character last fall, you should have promptly reported the facts in the case to the breeder from whom you purchased them, who would undoubtedly have been glad to make the warrant good.—ED.]

Duplicating Eggs.—I have a queen bee which lays from 1 to 5 eggs in each cell. The colony does not seem to do well; is it on that account, or does that make any material difference with brood-rearing? Please answer through the BEE JOURNAL.

Eastville, Iowa. A. L. CONGER.

[If the brood chamber is honey-bound, a prolific queen would be obliged to cease laying or duplicate her eggs in the cells. If there is plenty of room, and she persists in the habit, better supersede her as soon as possible. It is this duplication, whether forced or otherwise, that retards the prosperity of the colony.—ED.]

In the Sweet By-and-By.—May 22—Amid the bursting buds and springing flowers, through the balmy spring days and under the laughing skies, how pleasing the sight and sound of the "blessed bees." Never did the music of their tireless wings seem sweeter, never did the apple blossoms teem with more fragrance, never did the prospect of an overflowing honey crop gladden more the heart of ye lover of liquid sweetness. A year ago I seeded about half an acre to alsike and white clover mixed. It is intended for lawn. I never saw such a luxuriant growth as it has made. If the reality is anything like the prospect, that patch ought to yield half a ton of honey this summer. I have seeded about twice as much this spring in the same manner, and for the same purpose. My object is to make a lawn, and I thought that by mowing twice during the summer I could keep the clover sufficiently short for so large a yard, and at the same time get two crops of white clover honey. Whether any advantage will be gained by mixing the varieties remains to be seen. May 23—How vain are human hopes and anticipations! Last night there came a frost—"a biting frost"—and to-day the tender things look sick enough. The Manitoba wave struck Iowa, and struck her hard. It will take several days for nature to heal the sick flowers and tender vegetation. Yet I hardly think the apple blossoms are entirely killed. The bees brought in pollen from some source to-day. So we will continue to hope. It is better to hope against disappointment, than to despair when prosperity is possible.

EUGENE SECOR.

Forest City, Iowa, May, 1882.

Winter in May.—This morning found the ground covered with snow to the depth of two inches. So far this season my bees have been able to work only a very few days. Early forage, including fruit bloom, has been almost an entire failure, on account of the cold and wet weather. My bees are rapidly consuming their stores, notwithstanding I am feeding considerable. Bees have to be looked after very closely, as they consume feed very rapidly in rearing brood. White clover promises to be very abundant—saw it in bloom on the 21st. Should the weather turn dry and warm, I shall look for a bountiful harvest.

W. C. NUTT.

Otley, Iowa, May 23, 1882.

Disgusting.—The disgust of bee-keepers in these parts was perhaps never greater than it has been with the weather regulations since the freeze-out early in April. Storms, followed by frosty mornings and windy days, kept the bees in or destroyed those that ventured out until many exhausted their stores and had to be fed, and the stimulus of our first honey flow was so great that the queens filled the hives with brood and young bees, so that swarming with some commenced very early, the bees taking advantage of our occasional short spells of good weather to swarm, only to be shut up in a starving condition by succeeding bad weather. After two days of rains, yesterday was a fine day, and the flow of honey for those in reach of the tulip tree the best it has been since the disaster to fruit bloom, in April—what little white clover is in bloom being abandoned for this more easily procured nectar. In looking over one of my colonies yesterday, I found something that so far exceeded anything I had ever seen in my 4 years experience, that I have thought it worth reporting. During our short flow of fruit honey, early in April, this colony was storing up rather better than the others; I put on the second story, with ten sheets of foundation in Langstroth frames. Upon examination, I found that the queen had gone up and taken possession of the upper story and filled eight frames, most of them from end to end and from top to bottom. Supposing that she had entirely abandoned the lower story, I looked in it, and found six frames, not quite so full, but about as usually found at this time in the spring. If all my queens were capable of doing as well as this, I should consider that the "coming bee" was already here, and would not look any further. This queen is two years old. Most of her bees show only one band, and some not that. Last year this colony gave a surplus of 100 pounds with the extractor, while some colonies under the same conditions, gave little or none.

JOHN C. PEDEN.
Lawrenceburg, Ky., May 24, 1882.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., June 5, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 7c. for dark and 9c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax, on arrival; 18@22c. for medium grade, and 15@17c, for dark.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand for extracted honey, in the retail way, is fair, and our sales for manufacturing purposes were very good of late. We pay 7@9c. on arrival. Prices for comb honey nominal and demand slow.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for honey is light, most of the trade finding fault with the best offered, as it is more or less candied. Values are not steady, prices being made to meet the views of the purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—There are a good many small lots of very nice white section honey coming in now from time to time. White sells readily at 22c.; second quality 18@20c. Buckwheat, no sale at any price. Extracted, none in market.

BEESWAX—25@30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—Prospects for the coming yield were quite bright earlier in the season, but with no superabundance of moisture in some honey sections, drying winds and frosts have recently made the outlook less promising. However, it is still fair as compared with last year. We note this week a sale of 74 cases extra white extracted, one large can to the case, at 8¼c. cash.

We quote white comb, 13@14c.; dark to good, 7@11c. Extracted, choice to extra white, 7¾@8¼c.; dark and candied, 6¼@6¾c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

NEW YORK.

HONEY—Scarcely anything doing in honey, and prices are entirely nominal. White clover, fancy, 1 lb. bxs., 15@16c.; white clover, good to choice, 1 and 2 lb. bxs., 13@14c; buckwheat, 2 lb. bxs., per lb., 11@12c. Extracted and strained, white, 9@10c; dark 7@8c.

BEESWAX—The market continues rather quiet, but the supply is light and prices firmly sustained. Western, pure, 24@24½c.; Southern pure, 25@25½c.

D. W. QUINBY, 105 Park Place.

ST. LOUIS.

HONEY—In fair demand. Strained selling at 8@10c.; comb scarce—nominal at 18@22c.

BEESWAX—Prime in demand at 22@23c.

R. C. GREER & Co., 117 N. Main Street.

OLDEST BEE PAPER IN AMERICA — THE AMERICAN BEE JOURNAL — ESTABLISHED IN 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance:

For				
For **4** weeks		**10**	per cent.	discount.
" **8** "		**20**	"	"
" **13** "	(3 months)	**30**	"	"
" **26** "	(6 months)	**40**	"	"
" **39** "	(9 months)	**50**	"	"
" **52** "	(1 year)	**60**	"	"

Discount, for **1** year, in the MONTHLY alone, **25** per cent., **6** months, **10** per cent., **3** months, **5** per cent.

Discount, for **1** year, in the SEMI-MONTHLY alone, **40** per cent., **6** months, **20** per cent., **3** months, **10** per cent.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

◆

☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

☞ The postal law makes the taking of a newspaper and the refusal to pay for the same, theft, and any person guilty of such action is liable to criminal proceedings the same as though he had stolen goods to the amount of the subscription.

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

Advertisements.

Stanley's Vandervort Foundation.

We are now prepared to furnish our heavy and light foundation at the following prices: Heavy foundation, cut to fit any size frame, running about 5 feet per lb., with high side-wall, 43c. per lb. Thin foundation, made on the light or high-walled mill, 55c. per lb.; 10 per cent. discount on 100 lb. lots, if cut all one size. G. W. STANLEY & BRO.,

23w4t Wyoming, N. Y.

CAGE AND TRAP for Confining the Queen while Clipping her Wing.—Any person that can open a hive and find the queen can, with this device, clip her wing without danger of killing or injuring her in the least. Price by mail, postpaid, 30 cents; 4 for $1. Dealers send for price list by the quantity

FRANK FUNK.

23wtf Beverly, Adams Co., Ill.

FOR SALE,

One of the Largest Manufactories OF

Apiarian Supplies in the World.

35 Hands now Employed.

Here is an opportunity for one or two bee-keepers to obtain a good business. My reason for selling is that I am disabled. For information address "S," care of the Bee Journal, Chicago, Ill., who will forward the correspondence to me. 23wtf

NEW IDEAS.

Foundation ready for business, sheets bound with a light wooden rim, sample 6c; Bee's Tongue Register, sent by mail for $2.25; Italian Queens improved by a new process; Italian or Black Bees for sale in a hive adapted to migratory bee-keeping—can be securely closed for moving in one minute. For particulars address,

9smly **JOHN H. MARTIN**, Hartford, N. Y.

Excelsior Dunham and Vandervort *FOUNDATION.*

Owing to the large advance in the price of wax, I now quote prices thus: Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

J. V. CALDWELL,

3wly Cambridge, Henry Co., Ill.

4—RACES OF BEES—4

Italian, Cyprian, Holy Land and Hungarian Queens.—Warranted queens, $1.50: extra selected, $1.75; tested, $2. Send for my **21st Annual Circular.**

19wtf **HENRY ALLEY**, Wenham, Mass.

EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book. G. W. FISHER,

Box 238, Rochester, N.Y.

☞ Also for sale at the BEE JOURNAL Office. ☜

2w6m.

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. *Sells at Sight*, Double your money Address Dr. Chase's Printing House, Ann Arbor, Mich

36mlyp

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen	$4.50
2-frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1..	2.50
" " per half doz., after July 1	13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,

1wtf Burlington, Iowa.

100 Colonies

FOR SALE. ALSO,

TESTED AND DOLLAR QUEENS AND BEES BY THE POUND.

Send address for prices.

1w35t **JAMES HEDDON**, Dowagiac, Mich.

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1wly **D. S. GIVEN & C.**, Hoopeston, Ill.

1882-J. S. TADLOCK.-1882

LULING, CALDWELL CO., TEXAS.

Breeder of Pure Italian Queens. I use one of J. H. Nellis' best imported queens. Tested Queen, $2.50; per half-dozen, $13.50. Select Tested, $3; per half-dozen, $16. No "Dollar" or nuclei-queens handled. Safe arrival and satisfaction guaranteed, if possible. 14w39t

1882.-ITALIAN QUEENS.-1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby Smoker for $1.50. Address all orders to

L. J. DIEHL,

(Money Order Office)—Butler, Dekalb Co., Ind.

10wtf

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,

13wtf Abronia, Mich.

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

—"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Comb foundation on Dunham machine, 25 lbs. or over, 35c. per lb.; on Root machine, thin, for boxes, 40c. per lb. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1wly.

PRIZE QUEENS FOR 1882,

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

LOOK HERE!

If you want cheap bees and hives to suit, good Cyprian, Albino or Italian Queens, Comb Foundation, all kinds, Section Boxes, and everything a live apiarist needs, send for prices.

Full Colonies and Nuclei a Specialty

with good young Queens. Give me a call, friends, and I will try and please you. (Box 819)

E. T. FLANAGAN, Rose Hill Apiary,

5wly Belleville, St. Clair County, Ill.

A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

925 W. Madison Street, Chicago, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers' Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm. Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

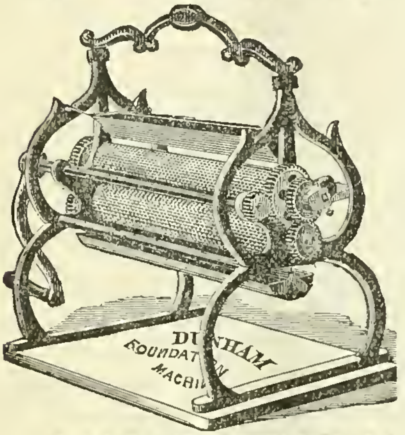
It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

FRANCES DUNHAM,

Inventor and Sole Manufacturer of

THE DUNHAM



FOUNDATION MACHINE.

Patented Aug. 23d, 1881.

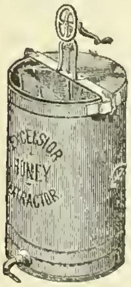
☞ Send for New Circular for January, 1882.

CAUTION.

Having obtained LETTERS PATENT Number 246,099 for Dunham Foundation Machine, making comb foundation with base of cells of natural shape, and side-walls brought up to form an even surface ; also on the foundation made on said machine. I hereby give notice to all parties infringing my rights, either by manufacturing said machines or foundation, as well as to all parties purchasing machines as above, other than of my manufacture, that I am prepared to protect my rights, and shall prosecute all infringements to the full extent of the law. **FRANCES A. DUNHAM,**
15sm4t DePere, Wis.

MY **16-PAGE PRICE LIST** of Italian, Cyprian and Holy Land Bees, Queens, Nucleus Colonies and Apiarian Supplies, will be sent to all who will send me their name and address on a postal card. **H. H. BROWN,**
14smtf Light Street, Col. Co., Pa.

EXCELSIOR
HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13	inches	..........$8 00
For 2 Langstroth "	10x18	"	.... 8 00
For 3 " "	10x18	"	..........10 00
For 4 " "	10x18	"	..........14 00
For 2 frames of any size,	13x20	"	..........12 00
For 3 " "	12½x20	"	..........12 00
For 4 " "	13x20	"	..........16 00

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

I wish to buy a quantity of good yellow Beeswax. I am paying **24c.** per pound, delivered here, Cash on arrival. Shipments solicted.
ALFRED H. NEWMAN.

HIVES AND SECTIONS.

We are in better shape than ever to furnish Bee Hives and Sections, having remodeled our machinery, and put everything in tip-top order for the coming season. We make a specialty of our

"BOSS" ONE-PIECE SECTION.

We have not sold any rights to manufacture, therefore we are the sole manufacturers in the United States. Send for Price List.

JAS. FORNCROOK & CO.
Watertown, Wis., Dec., 1881.

NOTICE—Some persons having infringed upon our Patent "One-Piece Section," we hereby give notice, that we shall prosecute all manufacturers. We shall not molest bee-keepers for USING those purchased before Dec. 1st, 1881, but hereby caution them against buying any except those bearing our stamp. It has been reported by some that it is our intention only to prosecute bee-keepers for using those One-Piece Sections heretofore purchased ; this is wholly untrue and false.
JAS. FORNCROOK & CO.
Watertown, Wis., Dec. 15, 1881. 51mtf

1882. Consult your interest, and send for my new circular and price list of colonies, Nuclei and Queens. Address,
9sm8t **S. D. McLEAN,** Columbia, Tenn.

TIN POINTS for GLASSING HONEY

Cut by machinery ; are much cheaper and better than hand-cut, and perfectly straight ; 1,000 to 5,000, 25c.; 6,000 to 10,000, 22c.; over 10,000, 20c.; 6c. per 1,000 extra by mail. Samples for 3c. stamp.
W. C. GILLETTE,
15sm5t LeRoy, Genesee Co., N. Y.

ONE-PIECE SECTIONS a specialty. Pound size, $4.50 per 1,000. L. Hives 50c. Also, Italian bees for $8 per colony. Circular free.
8sm12tp BYRON WALKER & CO., Capac, Mich.

PURE ITALIAN QUEENS—Bred from selected tested Queens ; also, Chaff and Simplicity Bee Hives, all kinds of Sections, Wide Langstroth frames, and all kinds of Apiarian Supplies. Send for Price List. A. B. MILLER & SON, Wakarusa, Elkhart County, Ind. 21sm4t

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1882. JOSEPH D. ENAS, 1882.

(Sunny Side Apiary,)

Pure Italian Queens,

BEES, COLONIES,

Nuclei, Comb Foundation, etc.,

Address, **Napa, Napa County, Cal.**
9m8t

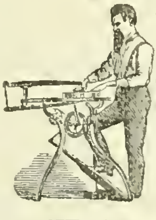
HEADQUARTERS IN THE SOUTH

For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November. ☞ Send for my Illustrated Catalogue.
5mtf **PAUL L. VIALLON,** Bayou Goula, La.

BARNES' PATENT
Foot Power Machinery



CIRCULAR AND SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

READ THIS.

FIFTY YEARS AN APIARIST.

We are the oldest breeders of Italian bees and manufacturers of apiarian supplies in New England. Our experience dates back to the first experiments of Mr. Langstroth in the movable comb system. Send for our price list of bees, queens and supplies, before making your purchases for 1882. Address, **WM. W. CARY & SON,**
1m6t Coleraine, Franklin Co., Mass.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly,* to A. I. ROOT, Medina, O.

1882.--QUEENS--1882.

I am now booking orders.

Warranted Italian Queens $1.00, six for $5.00 ; Tested do., after June, $1.50. Cyprians, Unwarranted, $1.00, six for $5.00. Send for circular giving description and recommendation from Postmaster and county officers. Money order office, Versailles, Ky. **J. T. WILSON,**
1mtf Mortonsville, Woodford Co., Ky.

C. Olm's Comb Foundation Machine.

☞ Send for Sample and Circular.
18mtf **C. OLM,** Fond du Lac, Wis.

Italian Bees, Queens and Sections.

Untested Queens, in May, $1.50 each ; in June, $1.25 ; July and after, $1; per dozen, after July 1, $10. Sent by mail, with directions for introducing. Italian bees by the half pound, same price as untested queens. One 2 comb nucleus, without queen (Gallup frames), in May $3, June $2.50, July and after $2 ; 2-comb nuclei, with the standard Langstroth frames, 25 per cent. more. Sections—Planed dovetailed sections, 4¼x4¼x1¾, $4.50 per 1,000 ; 5½x5½x1¾, $5 per 1,000. Sections of this thickness do not need tins between them to insure straight combs, and the bees can ripen up and seal honey faster than in combs with deeper cells. See testimonials in March number of *Gleanings.* Please remit by P. O. money order, by registered letter, or by draft on New York or Chicago. Address,
O. H. TOWNSEND,
19mtf Kalamazoo, Kalamazoo Co., Mich.

Langstroth Hives & Sections.

Lewis' Improved One-Piece Section.

Price $4.50 per 1,000, any size to 6x6.

No. 1—First quality, dovetailed, any size to 6x6, $4.50 per 1,000.

No. 2—Second quality, dovetailed, any size to 6x6, $3.50 per 1,000.

No. 2 is planed smooth one side, same as No. 1, but lumber is not as clean and white.

LEWIS' ONE-PIECE BOXES, of white Basswood, all sizes, VERY LOW. No charge for boxing or crating sections.

Send for new Price List.

C. B. LEWIS,
January 1, 1882. [1mtf] **Watertown, Wis.**

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

GERMAN
POULTRY AND BEE GAZETTE.

Deutsche Gefluegel und Bienen-Zeitung.

The only paper of its kind in America ; 75 cents a year—sample copies 10 cents.

C. C. STUECKER, Publisher,
18mtf **Louisville, Ky.**

THE BRITISH BEE JOURNAL
AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited and published by
C. N. ABBOTT, Bee-Master,
School of Apiculture, Fairlawn, Southall, London.

☞ We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal,* both for $3.50 per annum.

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
1wly Hamilton, Hancock Co. Ill.

We now quote an

Advance of 5 Cents per pound

on the PRICES PRINTED IN OUR CIRCULARS, wholesale or retail. 15wtf

INQUIRIES

CONCERNING

THE CLIMATE,

Mines, Manufactories and Commerce

OF

COLORADO,

will be promptly and truthfully answered by private letter, upon sending One Dollar to the

Woman's Industrial Association,
15w6mp 291 Sixteenth St., **DENVER, COL.**

Advance in Foundation.

The manufacturers of Comb Foundation have advanced the price 5 cents per pound, owing to the increased cost of Beeswax.

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—:o:—

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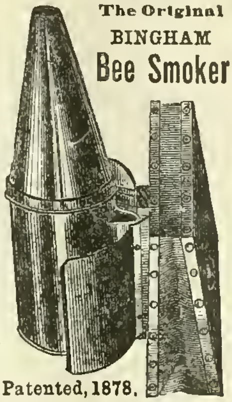

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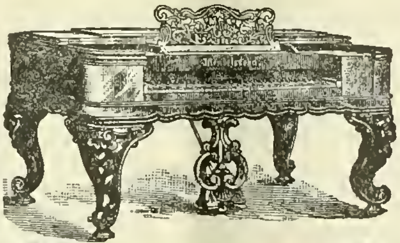

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THE AMERICAN BEE JOURNAL

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items........................ 369, 371
Prospects Brightening........................ 369
A "Scientific Pleasantry"........................ 370
Oleomargarine Before Congress........................ 371
Curiosities of Bees........................ 371

Among Our Exchanges—

Building Straight Combs........................ 372
Dzierzon Theory........................ 372
Canadians Beware of Glucose........................ 372
Honey Crop in the South........................ 372

Correspondence—

Reply to Dr. L. James........................ 372
The Heath Bee and the Caucasian Bee.... 373
The Dry Feces of Bees........................ 374
A Few Hints to Beginners........................ 374
The Coming Market........................ 374
Wintering Bees in Clamps........................ 375
Work of the Overflow........................ 375
Dollar Queens—The Place they Occupy... 376
Light vs. Dark Italians........................ 376
Clamps for Wintering........................ 376
Theory is Not Infallible........................ 377

Selections from Our Letter Box—

Sweet Clover in Woods Pasture........................ 377
Bees are Booming........................ 377
How to Produce the Coming Bee........................ 377
From Louisiana........................ 377
Loss of Queen........................ 377
Have Dwindled........................ 378
Negroes as Bee-Keepers........................ 378
Working Drones........................ 378
Too Cold and Wet........................ 378
Putting on Sections........................ 378
Boiling Honey........................ 379
An Open Letter to Prof. Cook........................ 379
Late Spring........................ 379
Beetles........................ 379
Hiving, etc........................ 379
Bees Doing Well in California........................ 379
Prospect was Never Better........................ 379
Phenomenal........................ 380
Good Increase........................ 380
Upward Ventilation........................ 380
Kingbirds........................ 380
Doing Fine in Texas........................ 380
Disappointments........................ 380
Myrrh on Bee Stings........................ 380
Bad for Queen Rearing........................ 380
Backward, Cold and Wet........................ 380
Doing a "Land Office Business"........................ 380
Interesting........................ 380

Prospects Brightening.

Cheerless and unpropitious as has been the weather, and despite the numerous complaints regarding the backwardness of spring many are beginning to realize that all has been for the best. Last Thursday (8th inst.) we observed an Italian bee working satisfactorily on the few white clover blossoms which have yet made their appearance in this locality; and it was the more gratifying, from the fact that the blossoms were quite fresh, and the nectar secretion had come to the surface almost simultaneously with the unfolding of the petals. While the rain and cold have in places disappointed many who anticipated a surplus from fruit bloom, they will prove to have been a blessing in massing and invigorating the white clover sward, and in strengthening the fibers for a greater honey secretion. Last spring our first observation of a bee upon white clover blossoms was June 10th; so, notwithstanding unfavorable weather, we are still two days in advance this year. But it will be fully a week or more before white clover will be in general bloom with us. We must credit Mr. C. H. Dibbern, with the first shout of joy, dated Milan, Ill., June 7, 1882, as follows:

> We are now having some "glorious days" for the bees. White clover is just coming into full bloom. Bees are working in sections and swarming. Everything is now favorable for a good yield.

◆

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

☞ The report of the Department of Agriculture for June announces a decrease of 17 per cent. in the acreage of spring wheat. Winter wheat averages 100 in condition, and there is now a strong probability that both varieties will give a very satisfactory yield, being exceeded only by the crop of 1880. Corn planting in many of the States was not completed by June 1st, but a large increase in acreage is reported. The prospect for oats is most excellent, and the acreage is increased 7 per cent.

◆

☞ H. A. Burch, we learn, is endeavoring to redeem his reputation by filling some of the orders received and not filled last year. We shall be glad to learn that all are filled, and hope all who get anything will report to us, not necessarily for publication, but that we may have the facts.

◆

☞ In the last number of *Gleanings* the editor says: "Everybody now seems prospering in the bee business, and I hope this season to see nice honey offered at so low a price that it may come more into general use than it has ever done any season before." Many times have we expressed the conviction, that the consumption of honey was daily becoming more popular, and that its economic value as an article of food was being more generally appreciated, and for this reason we should greatly deplore an unusual shortness of product, or an exorbitant price; but we quite as sincerely hope the price will never become so depreciated as to make its production unremunerative. Better have a fair average crop, and good price for it, than a plethoric yield and a meager profit. But the market cannot be surfeited.

◆

☞ The price list of queens and bees of J. D. Enas, Napa, Cal., is received.

A "Scientific Pleasantry."

On page 243 of the Bee Journal we published, under the heading "Blunderers in High Places," an excerpt from the *Indiana Farmer*, attributing reckless language to Gov. Porter, of Ohio, and unscientific assertions to Prof. Riley. A recent number of the *Farmer* reprints our article with a criticism or rejoinder from a Mr. H. W. Wiley, which is certainly original in its style, if not very witty. Following are his remarks:

> The above extract from a recent number of the Bee Journal, is such a successful piece of humor that one not acquainted with its origin, should assign it to Mark Twain.
>
> "Glucose" has the same effect on the Bee Journal man that a red rag has on an infuriated bull, and it is decidedly amusing to see the awful anger which this innocent *taffy facient* can produce.
>
> As I am probably the person meant by the "Prof. Riley" alluded to in their mellifluous effusion, I think it but just to the eminent entomologist of the agricultural department that I should relieve him of all responsibility for the "recklessness" which seems about to destroy his "posthumous reputation as a scientist."
>
> I am perhaps also directly responsible for the "gross blunders" of Gov. Porter, and so I hasten in *propria persona*, and not as Prof. Riley, to take the whole burden of the Bee Journal's wrath on my own feeble shoulders. Perhaps it may be well enough to give here the origin of the "paraffine comb" story which has appeared, I believe, in almost every publication in the country. The original appeared in the *Popular Science Monthly* for June, 1881, in an article entitled "Glucose and Grape Sugar," which I contributed to that number, and on page 254, occur the following words: "Bees eat glucose with the greatest avidity; or rather, they act as funnels by which the glucose is poured into the comb. For it is quite true that honey made by bees which have free access to glucose differs scarcely at all from the glucose itself. But the quantity of honey which a bee will store away when fed on glucose is truly wonderful. This gluttony, however, rapidly undermines the apiarian constitution, and the bee rarely lives to enjoy the fruits of its apparent good fortune. In commercial honey, which is entirely free from bee mediation, the comb is made of paraffine, and filled with pure glucose by appropriate machinery."
>
> This last clause which, when written, was meant for a scientific pleasantry, came near throwing the whole bee world into epilepsy. It appears that persons who devote themselves to Bee Journals undergo a certain cerebral inspiration which renders them incapable of seeing a joke. The only point which they can appreciate seems to be the sting of a bee. Governor Porter, in his able and interesting address, said something similar to the above, and succeeded, as he intended, in raising a hearty laugh. I am appalled to think of the awful solemnity with which the Governor's remark would have been received had his audience been composed exclusively of editors of the Bee Journal, instead of the intelligent yeomanry of Bartholomew county.
>
> Governor Porter, however, did say that an eminent apiculturist told him that he could only tell genuine from artificial honey by the after taste of formic acid which the genuine honey left in his throat.
>
> Perhaps in order to secure a "posthumous reputation," for which I care little, I might undertake here to show the Bee Journal the great similarity between genuine honey and good glucose, but I fear it would be "love's labor lost." He is evidently suffering from an acute attack of gluco-phobia, and what I might say with the best intentions would only throw him into another spasm. When in "posthumous" times he shall send on those vast expanses of flowerful clover to which all good bee journal editors go, and live off of ethereal "milk and honey," let us hope that he may never find his milk chalk-water, nor his honey glucose.
>
> H. W. Wiley.
>
> Lafayette, Ind. (late Riley).

The rejoinder reminds us of an anecdote we heard many years ago, located in a rural district in Indiana. A well-to-do farmer lost a very fine filly from his pasture-lot, and after several days' search found it snugly tied in the log barn of a distant neighbor of doubtful repute. The neighbor was indicted, tried, and found guilty of larceny; when the Judge asked what he had to say, why sentence should not be passed, he put in a plea that the animal was only taken for a joke. The Judge inquired how far his barn was from the pasture lot, to which he replied, "about 5 miles." "Well," said the Judge, "that is carrying a joke too far; hard labor in the penitentiary for seven years." The writer above says he contributed to the *Popular Science Monthly* his "paraffine comb" story [lie] about a year ago, "which has appeared in almost every publication in the country." The latter part of the article, however, was only meant for a *scientific pleasantry*.

Do scientific men indulge in pleasantries which will cast a gloom over thousands of honest producers throughout the country, and depreciate the value of their product by creating a prejudice against it? For nearly a year this *scientific joker* saw his fabrication published in nearly all the papers in the country, and reiterated from across the ocean, and yet he lacked the manhood to affirm it a joke until the "Bee Journal man" counteracted its influence by showing the falsity and absurdity of the article. Whether it be true, as has been often intimated, that the story was instigated by parties interested in the glucose traffic, in retaliation for the hostility of the bee men to their frauds, we cannot affirm; but we do believe it originated with no honest intention. It is quite probable the article would never have attained the dignity of requiring a refutation, had it appeared in a less accredited authority than the *Popular Science Monthly.* And considering the author's *waggish* propensities, can it be possible he furnished the *Indiana Farmer* the item attributing to Prof. Riley the utterance of his own falsehoods? Evidently the *Farmer* placed too much confidence in the veracity of some one other than their own reporter. That paper, in its issue of the 10th inst., alludes to the article above, and evidently as deeply deplores Mr. Wiley's tergiversations as do all others honestly inclined. Quoting after the "street gamins" it says, "Shoot the 'scientific pleasantry'."

Could any possible good result to society at large from such reckless assertions, there might be some palliation; but when the only justification which can be urged is that it was intended as a "scientific pleasantry," it leaves the author but little to congratulate himself upon, even though he has succeeded in disgusting the world. H. W. Wiley (late Riley) has earned for himself a posthumous reputation, which will stand second only to that of his illustrious prototype, Ananias.

☞ Mr. Peter Brickey, Salvisa, Ky., has sent us a portion of a frame exhibiting his method of fastening foundation for the brood chamber. He makes a V-shaped groove in the center of the top-bar, stands the foundation on edge in this groove, and fastens it by pouring melted wax along the sides, in the groove. The work is very neatly performed, and quite as substantial as comb itself. After the frames are prepared, we should think the work could be rapidly done.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

Oleomargarine Before Congress.

The Associate Press dispatches from Washington, of the 8th inst., contain the following paragraph:

> The house committee on commerce will hear representatives of the oleomargarine interest to-day against the bill to regulate the exportation of articles made in imitation of butter and cheese. The committee will either report this bill as it now stands or amend it so as to better insure the accomplishment of its purposes. The bill requires the word "oleomargarine," "sueine," "butterine," or some other word as may be proper to designate the article, to be branded on every tub, box, firkin, or package for shipment to a foreign country, containing any article or substance in the semblance of butter or cheese, not the actual product of the dairy and not made exclusively of milk and cream, but into which the oil or fat of animals not produced from milk enters as a component part, or into which melted butter or any oil thereof has been introduced to take the place of cream. The penalty for a failure to brand, mark or stamp such articles and filing in the custom-house a manifest thereof is $1,000, one-half of which is to go to the informer. The bill provides that the secretary of the treasury shall appoint an inspector of dairy products for the port of New York and for any other port where he may deem it necessary. Under the bill the collector shall not grant any clearance for a vessel on which is found any of these unbranded articles until the same are properly marked and described in the manifest.

We sincerely hope the committee on commerce will report the bill back recommending its adoption. If the precedent is established regarding its exportation, as a commercial necessity, then it is subject to Congressional legislation as between the States, and it opens the way for restrictions upon the glucose traffic, and all poisonous adulterations, not only as a sanitary measure, but as a commercial necessity. We are still of good heart concerning the "good time coming," when commercial transactions will mostly be carried on honestly, many from conscientious dictation, but generally from compulsion—when it will be declared a punishable offense to sell bogus honey and butter.

The Chicago *Evening News* of June 8 has the following suggestive paragraph:

> Owing to the depression in the glucose and grape-sugar trade, the national association, at a meeting in Chicago Wednesday, appointed a committee to devise plans for consolidating all the factories.

Whether the depression in the trade is owing to competition, or is indicative of a growing disfavor we are not informed, but it is probably attributable to both causes; nor are we told what benefit they expect to derive from consolidation, unless it be to concentrate all their energies in the way of bribing legislation, and to resist the growing hostility which will ere long assume form and demand legislation from Congress to regulate the glucose traffic, and protect honest consumers from their poisonous adulterations.

Curiosities of Bees.

The London *Times* gives its readers the following as some of the "curiosities of bees," which were believed in ancient times. The modern bee-keeper will smile (and perhaps audibly, too) at many of the statements:

> According to Virgil, Jupiter gave the bee its marvelous habits, because bees fed him with honey when, as an infant, he lay concealed in the Cretan cave from his father's search. The Curetes, a Cretan tribe, used to dance round the babe and drown his cries by rattling brazen cymbals, whence comes the origin of swarms of bees at the present day being pursued with much clanging of keys against frying pans, the belief being universal that this noise is agreeable to them. Indeed, Pliny, with questionable logic, argues, because this clatter is always made when bees swarm, therefore they must be gifted with the sense of hearing.
>
> Kirby, who wrote a most valuable monograph on bees, estimated that there are about two hundred and fifty species of them in England.
>
> It is generally supposed that those bees which are peculiar to the New World are destitute of all offensive weapons. Humboldt, however, explains that they have stings, though comparatively feeble ones, and they use them very seldom—only, in short, when irritated and forced to defend themselves. While seated on the peak over Caracas, in South America, he tells us, "determining the dip of the needle, I found my hands covered with a species of hairy bee, a little smaller than the honey-bees of the north of Europe. These insects made their nests in the ground, they seldom fly and from the slowness of their movements I should have supposed they were benumbed by the cold of the mountain. The people call them *angelitos* (little angels), because they very seldom sting" (*Cosmos*, i. 435).
>
> Among the numerous tribes of leaf-cutting and mason bees common in England, most possessors of gardens must have noticed the ravages of the *megachile centuncularis*, one of the former class. It is much smaller than the hive bee, and cuts little segments, as clear as if punched out by a machine, from the leaves of roses and peas. The operation is very speedily performed when the bee has once made her choice; the strong mandibles go to work, and soon the bee flies off with her green load. If followed, it will be found that her nest is situated in some palisade or gate-post. The creature runs her tunnels into the wood by means of these same powerful jaws, and then lines them with the pieces of leaf. They are not fastened together, but the cells are honey tight, and as fast as they are lined with leaves, an egg is dropped into each. Perhaps Virgil, Pliny, and the other ancient writers who speak of bees carrying ballast to steady themselves in windy weather, had witnessed the doings of leaf-cutting bees, and confounded them with hive-bees.
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> The working bee never lives longer than nine months; they labor so incessantly it is supposed they never sleep. The daily consumption and waste of a large hive of bees in summer may be taken at two pounds of honey; it will show the industry of the working bees to bear in mind that, beyond this, such a hive in favorable weather will often accumulate honey to the amount of four and six pounds daily. Indeed it is upon record that a hive once gained twenty pounds weight of it in two days!
>
> It is curious that even wild bees can soon be taught to recognize and refrain from attacking people who approach them. No wonder that the ancients esteemed them as divine; that their poet laureate, according to the Platonic philosophy, assigns them "a participation in the Supreme mind and in heavenly influences;" and that another speaks of their power of presaging wind and fine weather. Modern science points out that the fructifying of many flowers is due to the labors of bees in mingling the pollen; and most gardeners must have noticed the difficulty of preserving a pure strain of any plant when these active workmen have access to other varieties of it.

☞ Mr. James A. Daniel, of Alexandria, La., has our thanks for a copy of the New Orleans *Times-Democrat*, detailing the mode of making glucose by a new process, as recently discovered by a couple of gentlemen of that city. As the names of the chemicals employed are purposely withheld, we draw the inference that it is no improvement on the vile stuff now in use, and has nothing to recommend it, except, perhaps, that it is a cheaper and quicker way of producing it.

☞ Mr. Robert Corbett, Manhattan, Kans., has our thanks for a very fragrant bouquet, composed of roses, acacias, spirea, Indian currant, and other flowers. It is gratifying to observe the growing interest being manifested, by bee-keepers, in Nature's most pleasing work—the flowers.

AMONG OUR EXCHANGES

MISCELLANEOUS.

Building Straight Combs.—The *Indiana Farmer* remarks thus on this subject:

All colonies which have been hived in empty frames should be examined frequently to see that they are building the combs straight in the frames. Hives should set perfectly level from side to side. A very good plan is to elevate the rear end of the hive three or four inches. The bees will commence at the highest point to build the combs. After they have built the combs about half way down the frames, turn each alternate frame end for end. This will throw the empty end of the frames between the pieces of comb built in the other frames, and will almost insure the balance of the combs to be built straight. Should you find they have built the combs a little crooked push them back in place, if too far gone for this cut them loose and tie in place as in transferring. Much care should be given to have all the combs built perfectly straight at the start, thereby saving much trouble and vexation in the future. The combs must be straight to secure the benefits pertaining to the movable frames. For unless the frames are really movable, exchangable, they are of no more benefit than box hives.

◆

Dzierzon Theory.—Mr. B. F. Carroll, Dresden, Texas, gives the following in the Texas *Agricultural Journal:*

I am skeptical about one feature in the Dzierzon theory. The ninth proposition is: "All eggs germinated in the ovary of the queen develop as males, unless impregnated by the male sperm while passing the mouth of the seminal sac or spermatheca when descending the oviduct. If they be thus impregnated in their downward passage (which impregnation the queen can effect or omit at pleasure), they develop as females." I claim that all the eggs are impregnated, male and female, or they would not hatch into a live insect capable of reproduction. What I deny is that "common or black queens fecundated by Italian drones, produce mixed or hybrid workers, indeed, but pure common or black drones exclusively." I claim, and with as much show of truth, that if the male progeny of a mammal, and especially our domestic fowls, is tainted by mismating, then we may expect the same of the honey-bee. I claim that the male bee is produced by the egg receiving a certain kind of very thin mucoid—which is enough to satisfy nature, and whenever a queen is mismated her drones as well as her worker progeny, will be hybrids.

Last spring I began operations with twenty colonies. Nearly all had daughters of imported mothers—except four purely marked home-bred Italians, and one pure Cyprian mismated. Three of the queens were mismated, or in other words, were fecundated by black drones. I reared 20 young queens from a pure Cyprian, and some of these, I am satisfied met drones from the mismated queens, as one of the hives had nearly as many drones as the other nineteen, and their bees show plainly the black blood. All the the queens—four in number—that met the half-breeds, show that they are not pure, as many of their bees show only one and two yellow bands, and hardly any full black.

I claim the above as facts demonstrated in my yard in 1881, and it is no pet theory, but direct from the hive. If the Italian bee is only a "thoroughbred," as some assert, the facts are more easily proven. A cross between a pure Italian queen and a German drone, and a drone from this mismated queen crossed on a pure Cyprian queen, (which is a pure race) will produce a beautiful bee, but now and then the unmistakable signs of the original Dutch "granddad" will crop out, to prove to all who will believe the truth as I see it, that the theory of parthenogensis in the production of the male bee is without foundation.

◆

Canadians Beware of Glucose.—The *Rural Canadian* gives the following note of warning:

In view of the following advertisement which appears in the *Globe*, we must now keep a sharp look-out for adulterations of Canadian confectionery and honey:

"Glucose! Glucose! Glucose!—The Edwardsburg Starch Company now offer to the trade the finest quality of glucose, equal to any imported. Canada Grape Sugar Works, Cardinal, Ont. Office—Montreal."

Long before there was any need to do so, many of our people hesitated to buy extracted honey lest it might be mixed with glucose. The public should know that it is not at apiaries, but in city factories, that this adulteration is done. Our bee-keepers are alive to the mischief, and will brand their honey so as to guarantee it against vile admixture. Let honey buyers purchase only of known and responsible bee-keepers, and they will be all right.

◆

Honey Crop in the South.—The *Planters' Journal* of Vicksburg says:

Bees throughout all portions of the Southwest are reported to be fine, healthy and in most excellent working condition. The amount of forage is large, and honey-making material abundant. There is a good prospect, and promise is that the crop of honey will be very largely in excess and superior in quality to that which has been produced in former years. A special reason, however, for this, is explained in the fact that the interest in this industry is increasing in the South, and bees are being more extensively cultivated than formerly, all of which is gratifying to the *Planters' Journal*, which takes a lively interest in this specialty.

CORRESPONDENCE

For the American Bee Journal.

Reply to Dr. L. James.

G. M. DOOLITTLE.

As Dr. James wishes to know how I manage to manipulate my bees in early spring (see page 329) without the intrusion of robbers, I will say: As a rule I do not find it necessary to open hives to any great extent till pollen becomes plenty. In most localities pollen is obtained from 6 to 8 weeks in advance of the main honey harvest, and as 6 or 8 weeks gives me time enough to stimulate the bees, thereby getting them ready for the harvest, I do not disturb them to any great extent till their disposition for robbing has become in a measure changed to that of pollen gathering. When busy gathering pollen, I find but little difficulty in opening hives as much as I please; still, by a little carelessness on my part, even with plenty of pollen, I am sometimes obliged to suspend operations during the heat of the day.

The point is just this: If we can so manage that no bee can get the first taste of honey, and maintain such a state of affairs all will go well; but if 2 or 3 bees get home with a load of stolen honey, we shall soon be obliged to suspend operations from the cloud of robbers which follow us. To illustrate: This spring I had been at work with the bees several days without trouble, when one day I set a comb down behind a hive for a moment, thinking to use it so soon that it would be useless to set it inside the box I always carry with me at this time of year to hold such combs and all scraps of honey which are trimmed off. When I wished to replace the frame in the hive, supposing I had set it in the box I opened the lid and took one out of there. As it was just about noon I was soon called to dinner, and, of course, left the comb where I had set it. When I came out from dinner the first thing I heard was the shrill noise of robber bees, and not knowing why I should see bees trying to get into many of the hives at the back side, I went into the bee yard to see what the trouble was. I was not long in finding my comb black with bees and quite angry at myself to think I had been so careless. Nearly a week elapsed before I could work with my bees again without a cloud of bees ready to pitch into every hive as soon as I opened it.

If I am obliged to open hives before pollen is plenty I do it after the bees are mostly through flying, in the latter part of the day. Also 2 or 3 can be opened every two or three hours, even in the middle of the day; but as a rule, I open but few hives before pollen is plenty. At this time I provide myself with two boxes made for the purpose, one of which is to be used to convey combs from the shop to the bee yard and hold them secure from the bees while I am at work, and also hold all bits of comb which I have occasion to trim off. The other is used to set the combs in which are first removed from the hive in order to give room to manipulate the rest, thus keeping all secure from the outside bees; it is also used in carrying brood to strengthen feeble colonies, and for all purposes where bees, brood and honey are to be kept outside the hive.

By thus working I have no trouble, as a robber bee is sure to be caught as soon as he touches the top bars to the frames occupied by Italian bees. If a colony is weak in bees, the quilt is left to cover all the frames which do not have bees enough on them to protect them. Another point is, do not smoke the bees only just enough to keep them quiet, for if you smoke them enough to get them to running, they will "dive" for the honey, and also let the robbers "dive" for it, too. By thus using care, I get along nicely, while one careless move like the above keeps me away from the bees for nearly a week, only as I open a hive or two at a time, and work after the bees have mostly ceased to fly.

Borodino, N. Y.

London Journal of Horticulture.

The Heath Bee and the Caucasian Bee.

G. DATHE.

[The following paper was written for the Cologne bee meeting, but in consequence of the death of the author was not delivered, and has been published in the *Bienenzeitung*, from which this translation has been made.—Alfred Neighbour.]

I have no intention of drawing a comparison between the Heath bee and the Caucasian bee; I only wish to give a short account of my experience as regards the two varieties of bees.

To begin with the Heath bee. The demand for Heath bees has been very much on the increase lately, though this is certainly not due to any special recommendation, and it no doubt proves that the good qualities of these bees are becoming more appreciated. It is a peculiarity of the Heath bees that they increase largely and give off many swarms, for which reason they are especially suitable for those bee-keepers who are anxious to increase their colonies, and therefore rejoice to see their bees swarm frequently. But the Heath bees do not only give off many swarms, they also collect large quantities of honey, as may be seen in the Luneburg Heath district. In no part of Germany is the honey harvest so large as it is there, for while in other parts of the country pots suffice to hold the honey which the bees collect, the Luneburg Heath bee-keepers are able to fill many casks. People are therefore disposed to look upon the Luneburg Heath as an "El Dorado" where honey is always flowing, but this is by no means the case. While in some districts a populous colony will collect 10 lbs. of honey in one day when pasture is plentiful, the outside maximum at Luneburg is 48 per day. Nor does the Heath yield honey uninterruptedly all the time it is flowering. We are satisfied with an average of 12 fine days for utilizing the Heath; if there should be any lightning while the Heath is flowering, it frequently puts an end to the visits of bees. In many a year the honey harvest from the Heath is next to nothing. The Heath bee-masters know how to alter their method according to circumstances, and this is the principal cause of their harvesting such large quantities of honey. This affords me an opportunity of giving a few hints as to the management of Heath bees in case of their introduction into other districts:

They are particularly suitable where the native bees do not swarm sufficiently. By simply intermixing the two races their hybrid offspring show somewhat more inclination to breed and to give off swarms. The bee-keepers' first and foremost endeavor should be to obtain swarms as early and as large in population as possible, and this he will be able to accomplish if those hives from which he intends the swarms to issue are fed simultaneously with a quarter to half pound of honey two to four times a week, commencing four to five weeks before the time of swarming, continuing the feeding until the first swarm has been given off. Should unfavorable weather set in about the time of swarming and continue, the first swarm might be driven off.

The first swarm will have sufficient population to form a separate colony, but the swarms that follow—and the size of which becomes smaller the greater the number that leave the parent hive—should be united so as to form colonies weighing at least 3 lbs. each. This is the more necessary in districts where there is no autumn pasture, but unfortunately this advice is very often not attended to. Every swarm, however small it may be, is frequently placed as a separate colony, and if it proves a failure people get dissatisfied and blame the Heath bees. When second swarms are put into wooden hives and can be assisted with a brood comb or two from other hives, they need not of course be made quite so large. When bees are found to make preparations for swarming, the drone comb both with and without brood and royal cells should be removed until the bees no longer show any inclination to swarm. If Heath bees are treated in this manner, it will be found not only that they increase largely in population, but also that they are able to collect large quantities of honey.

I will now proceed to make a few remarks on the Caucasian bees. I must frankly confess that I had lately become somewhat prejudiced against the introduction of new races of bees. I always found them highly recommended, but on close examination they generally did not come up to my expectation. For the same reason I was prejudiced against the Caucasian bees, and was doubtful whether I had better procure some. While in this state of uncertainty, I had a visit from Dr. Butlerow, Councillor of State of St. Petersburg, on his return from France, who requested me to give the Caucasian bee a trial, promising to send me two queens for this purpose from the Caucasus in the following spring. The two queens, each accompanied by a small colony and a supply of honey comb, arrived here in excellent condition last spring, and were placed at the head of two populous colonies of German bees, the Caucasian bees being allowed to unite with the German. My first experience with the Caucasian bees was that they unite with the German bees without exhibiting the least signs of hostility towards each other. The attempt made a few years ago to unite Cyprian and German bees in the same way resulted in the attack by the Cyprian on the German bees, which, in spite of all means of protecting the latter, continued for several weeks, until all the German population had been killed. My second experience was that they are very prolific and quite as fertile as the best colonies of Heath bees and the Italian bees.

The other qualities of the Caucasian bees could not be determined with accuracy until all the German bees had died off, leaving only Caucasians in the hive. With regard to their docility, which has been praised so much, I am able to state that they are very docile indeed. They do not sting when handled as bees generally are. I asked my son to irritate them, which he did, and I saw them buzzing about his face with the well-known angry sound, indicating that they were ready to sting, but they did not sting him. After several repetitions, one bee was at last induced to sting. We may therefore say, as a rule, the Caucasian bees do not sting, but if they are irritated they are capable of doing so. Because the Caucasian bees do not sting they have been supposed to be very phlegmatic bees, which would neither defend themselves against robbers nor collect much honey. But they are not phlegmatic; on the contrary, they are very quick and industrious. As soon as they make their appearance at the entrance of the hive, they at once fly off to the fields, and on their return are in as great a hurry to enter the hive. On the outside, the entrance is guarded by but few bees, but these are quite able to keep robbers away. Nor are the Caucasians, like other bees, to be seen in large numbers about the entrance of the hive in very hot weather; as they are very industrious, it is only natural that they should collect a large quantity of honey. As far as my own experience goes, I consider the Caucasian a very good race of bees, which deserved to be introduced into Germany; but whether they will stand our winter well and prove satisfactory in every respect, the future alone can show.

Eystrup, Germany.

For the American Bee Journal.

The Dry Feces of Bees.

WM. F. CLARKE.

I wish to call attention to the fact that three eminent apicultural authorities have recently given their evidence to the effect that bees when thoroughly healthy, void their excrement in a dry, powder form.

The first is Mr. Abbott, the editor of the *British Bee Journal.* In *Gleanings* for May, he expresses himself as being "rather amused at the apparent uncertainty" which exists in America as to whether bees void dry excreta, and says, that a "swarm-box" in which bees can fly, will be found after their confinement therein for 24 hours without comb, with thousands of grains of bee excreta, about the size and color of coarse gunpowder, on its bottom. He adds that "when bees travel with combs the case is different. They appear too cleanly to foul them, and hence protracted confinement produces what, for want of a better term, we call 'dysenteric symptoms.'"

Mr. A. I Root in some editorial comments on this communication, says, "it occurs to me that bees that have been sent to us almost invariably show something on the bottoms of the boxes that both sight and smell would have little difficulty in pronouncing excrement."

Mr. Gallup, in the same number, adverts to this matter when speaking of the manner in which bees would winter in old style hives, with a crack from top to bottom. Even "when the thermometer was 40° below zero, blow in the hive, or jar it, the bees would fly out as quickly and readily as bees do in the heat of summer, and you know, Mr. Editor, that when a bee flies out and is blinded with snow, he alights on his back, kicks up his heels, and just before he dies, discharges the contents of his abdomen. I have seen 'em do it in thousands of instances, and it was dry and powdery like, so much so, that it would not adhere to or smear anything." etc.

While I consider this third witness a highly credible one, I must confess that there is a dash of bigotry in his testimony which I do not admire. He goes on to say that "any bee-keeper in Maine, New Hampshire, Vermont, Northern New York, or Canada, who has not seen bees discharge dry, powdery excrement under the above conditions, is not and cannot be a very close observer." I am glad Michigan was omitted from this enumeration of localities, for do we not know that there are those in that State who not only can be but are very close observers, yet they have never seen what Mr. Gallup describes.

This matter is not one of curious interest merely, but highly practical. When we have discovered the conditions under which bees discharge dry feces only, we shall have solved the problem of successful wintering. For I do not believe with Mr. Abbott, that "protracted confinement" produces "dysenteric symptoms" if the bees are in such a state that they can void dry excreta. These appear, I have little doubt, only when the digestive apparatus of the bee has become, from some cause or other, disordered and diseased.

Listowel, Ont., May 19, 1882.

Iowa Homestead.

A Few Hints to Beginners.

HENRY WALLACE.

In these days of adulteration one of the most essential requisites of the farmers' home is pure, unadulterated sweets. It is to be hoped that in the near future amber cane grown on Iowa soil will furnish the sugar and syrups—not only for home use but for export. In the meantime, the prudent and skillful farmer can partially supply the want from the bee hive. Unnumbered tons of honey go to waste year by year in Iowa, for the reason that farmers do not provide workers to gather in the harvest. One great obstacle to success in bee-keeping is the popular superstition that some persons have luck with bees, and others have not. In this, as in all other matters, "good luck" follows close on good management, whilst all kinds of bad luck accompany bad management. Another, and great difficulty, is the fact, that few farmers will take the time to study the subject of bee-keeping. The native bee in a common box hive or a bee gum is a foredoomed failure.

Two or three things are essential to success. First, some kind of hive must be provided with movable combs. It is just as important that the bee-keeper have access to the hive and any part of it at pleasure, as it is for the farmer to have access to his farm and any individual animal on it. The shape and size of the hive are small matters. Give patent hives of all kinds a wide berth. The hive may be a cube or a square or rectangle according to fancy or convenience, but the frames must be movable.

The bees must be Italians, either pure or hybrids, or more correctly grades, and as all other kinds of live stock, the purer the better.

The beginner should have no more than one hive at first and make that a matter of special study. In the bee business it is well to make haste slowly. If a farmer cannot make one hive a success it is useless to attempt more. A little observation will teach him more in a few weeks than all the books that have ever been written, without the observation. He will soon learn where to look for the queen, how to divide the hives and when, the time to put in honey boxes and how. The bee requires but little attention, but it must be given just in the nick of time. All she asks of us is a house to live in for herself and a place to store our share of her labors. She boards herself, keeps her own house in addition, and presents her contribution to our table in a shape that no human wisdom can improve. She gathers in sweets that would else be wasted, and in so doing fertilizes flowers that would else be barren—in robbing flowers of sweets, she enriches them. Her home is the model of neatness and order. In industry and skill and cleanliness, and good government, and willing obedience there is nothing like it in all the earth. It is the ideal republic—excelling that of which Pluto dreamed. Its queen is not the ruler, but the servant, to be dethroned when her usefulness is past, but honored and served so long as she fulfills properly the duties of her station. To any farmer who has brains and will use them, we say, keep bees, keep them for your own sake; keep them to teach your children lessons of thrift, cleanliness, courage, order, and subjection; keep them to supply your table with one pure sweet, fresh from the hand of God—for bees do not make honey; God makes it and they gather it.

But we have not told our readers how to keep bees. When Joshua Reynolds was asked by one of his pupils how to mix paints, he answered "with brains, sir!" So it is with bee-keeping. Get a hive with movable frames and a good swarm of Italians. The rest is brains. If you have them and will use them, you don't need asking further. If you have not, give or sell them to your neighbor who has.

Winterset, Iowa.

For the American Bee Journal.

The Coming Market.

JAMES HEDDON.

The editorial in the BEE JOURNAL "Silver Lining of the Clouds," comes home to every bee-keeper of experience. Every good calculator is now doing just what is therein advised. But there is one vital point in this season's operations that it behooves us all to look well into. In last week's issue, I notice that Messrs Thurber & Co. quote "comb honey 11 to 16c." Here times are good. Labor is in good demand at advanced wages. All sorts of produce are very high; every time we turn around we are surprised at the advanced cost; comb foundation is 5c. higher; lumber is more than 20 per cent. higher; nearly all our supplies have advanced in price, and of those that have not, the material of which they are made has, though the vender stands the extra cost. The honey crop of last season was light and the markets are bare. I have received solicitations for honey from far and near, and I remember of no season coming in with clearer shelves than this one of 1882.

Now what is the meaning of "comb honey 11 and 16c.?" How many lbs. of this honey does it take to buy a bushel of potatoes, a ton of hay, a bushel of corn, or a pound of glucose? If honey gets much lower, and corn much higher in New York, there will be no danger of glucose adulteration. Is this the way the "great importing firm" is aiding American apiculture? While it is true that supply and demand has more to do with the ups and downs of prices, it is also true that cornerers are still cornering the markets. Two years ago, the Chicago market was depressed to your and our injury, by one or two reckless uncalculating producers shoving their honey on the market at prices that were not only damaging to all producers, but far below what they might have had, had they only known enough to have asked it.

The comb honey of 1882 should net the producer, in all the large markets of the world, not less than 20 to 25c. per lb., according to quality. The extracted not less than 10 to 15c. I have not sold one pound of honey in kegs and barrels, for the last three or four years, for less than 12 to 15c. per lb.; while my comb honey has netted me nearly the prices quoted above. Of course, the extracted was ripe, and the comb was in nice marketable shape. I refer to that style of goods, which is now mainly produced by all bee-keepers. Tub and pail honey is getting scarce, and there is no need for "scalping" our commodity any longer. Let every honey producer look about him and observe the prices he pays for every bit of produce he obtains, and let him realize the fact that under these conditions, it is the natural course of events that our commodity should also advance. Horace Greeley said "the way to resume" was to "resume," and I say the way to get what our honey is worth and costing us, is to ask it.

Look well to this feature of the season. Those who will not protect their own interests will soon be sold out, and their goods will just cultivate an appetite for ours, and the luxury-loving consumers are going to be willing to pay us a price in keeping with the cost of other produce. All of honey's competitors are going to be scarce. First is fruit—the late cold season has killed the bulk of the crop in most locations, as well as cutting away a portion of ours. Butter will remain higher this year than for several seasons past. Why "comb honey 11 to 16c.?"

[While we agree with Mr. Heddon, that the prospect for remunerative prices for honey were never better than this season, we certainly cannot indorse the implied strictures for giving correct reports of quotations in New York. We have no apology to make for Messrs. Thurber & Co., nor for any one else who may have been identified in doubtful transactions heretofore; but had they reported honey at a figure above its market value, we cannot see where any advantage would result to the producer. By reference to our market quotations for New York in this issue, it will be seen D. W. Quinby quotes honey at the same figure the Thurbers did, and there is no one to impeach the correctness of Mr. Quinby. One fact must be taken into consideration in connection with this subject, viz., that where honey can easily be sold in November at 16@22c., the same honey would perhaps bring but 11@16c. if held over till May and June, when much would be candied and culled, and when, too, holders are forcing the market, in anticipation of the new crop. We hope our readers will never lose a good sale of comb honey in the fall or early winter, in anticipation of improved prices in the spring—they will meet nine failures where one success greets them.—Ed.]

For the American Bee Journal.

Wintering Bees in Clamps.

THOMAS CHANTRY.

In number 20 of the Bee Journal, I saw an article from W. Z. Hutchinson, who quotes my experience to some extent. I also saw the article from Mr. Robinson, but first I saw a description of a bee clamp in Langstroth's "Hive and Honey Bee," which I partly imitated in the winter of 1877-78 with perfect success. It was the first colony I ever had. I took it from a tree on the 15th of September, 1877. The bees eat but little honey. I constructed my clamp as did Messrs Robinson and Hutchinson, except I placed a tube 10 feet long, made from 4 inch boards on the scantling that I placed the hive on, and let it extend perpendicularly in the air, putting my covering all around it. If I had had ground that I thought was dry enough, I should not have placed this tube in, but as there was no side opening there could be no draught through, nor change of temperature.

I dug my trench last fall, near my apiary, 2 feet deep by 2 feet wide, and long enough for 6 colonies, and placed my scantling 6 inches below the surface in the trench, built my pen and filled it with dry oat straw, and set 6 of the weakest colonies (covering from 5 to 7 American frames), on the scantling, and covered the hives all over with the dry straw, taking care that it was not packed around but was as loose as I could make it, then placed the tube, made of 6 inch boards, on the scantling with a cap, and to prevent anything from falling down inside of it made airholes under the cap and covered it as described by Mr. H., except I only covered it with about 12 inches of dirt, and let that remain till frozen then covered with 2 feet of cane stalks and straw. When I dug the dirt off and opened them, the 1st of April, before I could set them on their summer stands they were flying, and the colonies seemed as heavy as when placed in 5 months before.

They seemed only to have slept over night. The stronger were strong as ever; the weaker were as good as they were last fall; one had brood in all stages, and as soon as they were set out they all commenced breeding very fast, and are now as strong as any that wintered on the summer stands. I am pleased with my results of wintering in clamps. It is cheaper to me than a cellar, and I shall try it on a larger scale next winter. Those that have not a good cellar had better try it, and not be afraid of smothering the bees; but it must be dry.

Adair, Iowa.

For the American Bee Journal.

Work of the Overflow.

M. A. GARRETT.

Bees came through the winter without much loss. The winter being mild, my bees had a pleasant time of it. I had 87 colonies in the fall, and doubled them back to 70, so as to have them strong for winter. On the 10th of February I put on honey boxes, for the season was much earlier than usual. I gave M. A. Garrett, Jr., my son, half my bees, which he moved to my new home some half mile from where I am overseeing. I left mine at their old location. About the 20th of February the water began to rise from 2 to 8 inches in 24 hours. Having a large levee around our place we felt safe from any danger, as we had a large draining wheel to keep out seepage water. Unfortunately the water came to such a height that our levee gave way, and in 12 hours I had to put my 35 colonies on my gallery. It continued to rise till I had 3 feet of water in my house when I put my bees on a scaffold on the gallery, and in every window in the house. I then had to abandon my house to seek a dry place of safely for myself to stay. During my absence we had quite a storm, which washed the most of them off. My son had his in a new building elvated 6 feet from the ground. The waves turned it over and he lost his entire apiary. Together we lost 60 colonies; 59 were Italians; 25 empty hives and honey boxes, besides several hundred frames. We estimate our loss in bees, honey, etc., to amount to $865; I lost, besides, my entire crop of cane and corn. Some of my brother bee-keepers thought I ought to have saved my bees in a boat. That would have been hard to do. They were in clusters as large as my head at the entrances, and you could not smoke them in; in fact I do not think they had room, as they were full of honey and strong with bees. It is very easy to stand off and see a fight going on, and after it is all over to say, "you ought to have done this and the other; you would have whipped," when, if they were in the same place, they would not have done so well. The bees were cross and kept up a continual motion, as if all were going to swarm at once. This, I suppose, was caused by moving them so often. I extracted a half barrel of honey from what I had left, and had plenty left in the brood chambers. I think I may recover some of them this summer in the bee-trees. At this time the water is nearly out of our field, and we are busy planting cotton and corn, but I fear too late to do much good. It is a gloomy sight, to see our beautiful fields of cane and cotton left in such a horrible condition — fencing and houses taken off by the mighty power of the water.

New Iberia, La., May 25, 1882.

For the American Bee Journal.

Dollar Queens—The Place they Occupy.

W. Z. HUTCHINSON.

After all that I have written upon the subject of dollar queens, I fear that I am not exactly understood. Mr. Heddon says: "Yes, but my circular tells you that they are reared by another party, the gentleman who bought my Glenwood apiary one year ago; one who thinks, like Mr. Hutchinson, that he has the genius to rear them as good as they can be reared, and find a profit on them at one dollar." Now I have never intended to convey the idea that all of the dollar queens sent out by myself or by other breeders, are "as good as can be reared;" although I do think that many of them are as good as any queens that have been reared. The only point that I have tried to make, and the one to which I have clung so persistently, is that "dollar" queens are the equals of the so-called "tested" queens. When the BEE JOURNAL says that "the best is the cheapest," I agree with it in the main, and I presume that it will also agree with me, that "circumstances alter cases." If we can believe our leading queen-breeders, the only difference between dollar and tested queens is that the latter are known to be purely mated, while, with the care given to the matter by all reliable breeders, the chances for dollar queens to be impurely mated are very small. Mr. Geo. W. House, in the *Exchange* for April, says, and I agree with him, "that a properly tested queen (one that we would be willing to breed from), cannot be much short of two years old. We want to see the qualities of her daughters and grand daughters, before running her for queen-rearing, and for such a queen would expect to pay a good price." Prof. Cook says: "In testing, Mr. Hutchinson only waits to see if the requisite number of bands are present. I would have him wait to see if the requisite number of eggs, bees, and pounds of honey were forthcoming," and I agree with him. Choice queens, reared from the best stock, and selected with great care from a lot of queens that have been kept and thoroughly tested a year or two, cannot be sold for $1.00 each, nor for $2.00, or even $3.00 each, and the breeder receive pay for his time and trouble; and I don't know as any one thinks, expects, or has asserted that they can, I know that I do not and shall not. The breeder who wishes choice queens to breed from, must buy a lot of dollar queens, or a lot of the so-called tested queens, test them in regard to their best business qualities, select the best to breed from, and then select again from their progeny, and so on; or else he must buy choice queens of some reliable breeder, paying him for the trouble and time of testing them. The breeder of dollar queens, or of the so-called tested queens, can stock his own and his neighbors' apiaries with choice stock, he can rear his queens and drones in the best possible manner from the best stock that can be obtained, and then he must send out, as dollar queens, all queens that show no imperfections during the ten or twelve days that they remain in his yard, and, as tested queens, all queens that show no imperfections and prove to be purely mated. Some of the queens that he sends out will probably be as good queens as it is possible for him to rear, while it is quite likely that others will not be very valuable; the breeder does not know which queens will turn out prizes or which will prove blanks, that is something for his customers to find out. There is, however, no deception about the matter, as it is understood that the only guarantee in regard to dollar queens is that they are reared in a proper manner from good stock, and are laying queens. Tested queens are the same except that they are known to be purely mated.

If a bee-keeper secures an excellent breeding queen, paying a handsome price for her, and then rears queens from her, they are, virtually, dollar queens; they must be tested before it is known what they are. Now, then, what difference does it make whether a bee-keeper rears his untested queens or buys them?

When one has a large apiary as has Mr. Heddon, where queens can be kept doing duty in full colonies while they are being tested, the rearing and selling of tested queens for $2.00 or $3.00 each would probably be more profitable than the rearing and selling for $1.00 of queens that had just commenced laying; but where one's apiary, with the exception of a few colonies for building queen cells, is divided up into nuclei, the case is different; as, after working two or three days, the queen has the combs of her nucleus filled with eggs, and then can do nothing but "loaf" until the first batch of eggs hatches out into young bees.

Rogersville, Mich.

For the American Bee Journal.

Light versus Dark Italians.

AARON BENEDICT.

I am aware that it is much easier for the careless breeder to rear dark than light-colored Italians, hence they are ready to praise the kind of bees they have, and if queen-breeders, they can send out all the hybrid queens they can rear, if dark. Now, I believe if these advocates of dark Italians had queens that were light yellow, and produced all light yellow bees, they would sing a different tune, and their queens would give better satisfaction to purchasers. They would find that the yellow bees would gather quite as much honey as dark ones. It is the instinct of all honey bees to gather honey, if it is to be found.

I believe, and know, that bees can be bred as to size, color and docility; the larger the bee, the more docile. This holds good with the common black bees. Some are large, of a gray color; then there is a small, short, very black bee, which is very vindictive, and goes for horses, dogs, cats and chickens in a way that makes things lively. A cross between those small bees and Italians produces a bee that smoke, if once aroused, will not subdue, and whoever handles them will be obliged to have on double protection, and then if they do not find a way inside to a tender spot it will be a wonder. A cross between the larger gray bee makes a tolerable decent hybrid. I believe it should be the motto of every queen-breeder to breed from the very lightest queens that produce very light workers; use drones only from such queens, and improve as fast as possible; having in view, first, the lightest colored bees; second, large; third, docility. By careful breeding to these three points, I believe we might soon have a fixed type, or "the coming bee."

Bennington, O.

For the American Bee Journal.

Clamps for Wintering.

E. D. MALLORY.

We had 6 colonies in Langstroth hives, which, after some deliberation, we carried into the cellar. I say deliberation, because it was never my opinion that was the best method of wintering, although recommended as such by so many of our best bee-keepers, and it was through their experience and judgment that I was led to adopt the plan, as we had only been keeping bees about 7 years at that time, and, consequently, knew but little about winter management practically. About the same time that we removed the above hives to the cellar, we purchased 3 colonies of hybrids in old box hives, one of which was quite strong, another very weak, and the third fair; with these we resolved to try clamps. We placed them on their bottom-boards about 4 inches from the ground, and banked earth around them about one-fourth the way up the hives; at the entrance we placed conductors about 20 inches long, so that the bees could have free egress whenever they chose to go out; this done, we drove stakes into the ground and put boards behind them to hold the straw and chaff, with which we packed them to the depth of from a foot to a foot-and-a-half, putting a cover over all to keep out the wet. Here we left them to find the result later on. In the latter part of February we made an examination of our colonies, commencing with the box hives, which we found in fine condition—dry, evident signs of breeding, and quite heavy, and in returning them to the clamps we placed frames about 3 inches wide under the hives to give a little more circulation of air. Those placed in the cellar did not appear so favorable, they having been rather uneasy for some time; we brought them out, gave them a fly, and made a short examination of them, but found they were quite damp, with evident signs of dwindling, and a good many that flew out died before they could return. With the results of our two methods thus far, we concluded that it would be better to put the latter in clamps, too, than return them to the cellar, which we did, raising them from the bottom-boards and giving them plenty of air, and a free passage in and out of the hives. This spring we left them until quite late, and they came out almost full of brood, stronger, I think, than they were last fall by a quarter of their number, those in the box hives having extended their combs about 2½ inches below the hive into the frame which we placed under them in February. With this success in clamps, I think it will be some time before we attempt wintering our bees in the cellar again.

Frankford, Ont.

For the American Bee Journal.

Theory is Not Infallible.

GASTON M. ALVES.

It is thought that bees with a fertile worker will not accept a queen. Prof. Cook, in his "Manual," page 92, says: "Yet they seem to satisfy the workers, for they will not brook the presence of a queen when a fertile worker is in the hive, nor will they suffer the existence in the hive of a queen cell, even though capped." I quote from my note book of this year: April 4th. Forced box hive and put swarm into hive No. 14 with empty frames; put box hive on stand of hive No. 1, and moved No. 1 to a new stand; April 8—Found new worker comb and eggs in hive No. 14 (thus it is certain the queen was forced with the swarm from box hive). April 25—Forced box hive (see April 4th) into hive No. 16, with small strips of worker foundation in frames; looked for young queen, but could not find one. May 4—Examined hive No. 16; bees making only drone comb; one drone comb contains eggs and brood; no other brood. May 16—Gave hive No. 16 worker brood from hive No. 6, to see if queen cells would be started. About a week afterward (no entry made of this) examined the hive and found two sealed queen cells on the comb given on the 16th of May, but as the cells were constructed almost horizontally, I badly bruised them in lifting the frame out. I then destroyed them and sent to Mr. J. T. Moore for one of his Italian queens. June 3—Received Italian queen by mail of J. T. Moore, and introduced her caged, in hive No. 16. Still found only drone brood and eggs, and again, after very careful search, could find no queen. Colony considerably reduced in numbers. June 4—Liberated queen in hive No. 16, and found her in the after part of the day well received. Now, all of this seems to me to be evidence satisfactory of the presence of a fertile worker in the above hive; and hence it follows that bees will both construct queen cells and readily accept a queen in the presence of a fertile worker. We may hence conclude that bees value a fertile worker slightly, and are always ready to accept something better; and that fertile workers are not pests as generally imagined, but are simply the indication of certain abnormal conditions, which the bees will always endeavor to correct if the means are placed within their reach.

Henderson, Ky.

[You have had proof almost positive that a fertile worker did occupy the hive, and that a queen was accepted, but it is an exceptional case.—ED.]

SELECTIONS FROM OUR LETTER BOX

Sweet Clover in Woods Pasture.—Will woods pasture be too shady for sweet clover, to be successful for bee forage? We are having cold, rainy weather. Bees cannot fly more than half of the time. I have had 2 swarms. The hives are well stocked with bees, but there is a poor prospect for honey. I shall count on bees this year as I do on chickens. I never count on chickens until they are hatched and the rats have one week to work at them, then count the balance.

Villisca, Iowa. JAMES RENIAN.

[Unless the shade is quite dense, it will not be much detrimental to sweet or melilot clover for bee forage.—ED.]

Bees are Booming.—Bees wintered splendidly, and everything works all right yet. No frost to hurt fruit bloom (and trees blossomed very full), so bees have had a grand time. It has been a little cool at times, it is true, but they have built up very fast; 2 swarms May 25, and 27, and so on. My record says out of 40 colonies, 35 are marked A No. 1. Our prospects for fruit is grand, and if nothing interferes now, we will show Chicago some nice plums and peaches.

W. D. MARKHAM.

Hart, Mich., June 1, 1882.

How to Produce the Coming Bee.—I will suggest to the bee-keeper who wishes to immortalize himself by breeding for the "coming bee," according to the programme of Prof. Cook, in the article from the *Rural New Yorker*. The best place on the Continent to fertilize his queens is the island of Long Point, Ont., in Lake Erie. It is 15 miles from the Mainland, abounds in the timbers, wild flowers and plants peculiar to that latitude, including an unlimited amount of wild grape vines. The boats and steamers connect it with the main land twice a week, and the latter place is as fine a bee country as any part of New York State, while the climate is tempered by the waters of the lake, the coast for a few miles inland being the home of the apple, peach, plum, pear, and the finer varieties of the cherry, etc. On this island the bee-keeper can turn loose his choice drones, and bring his young queens there with a certainty as to the result. D. P. NORTON.

Council Grove, Kans.

From Louisiana.—My bees are doing very well. I have 13 colonies; 10 are strong. I will extract on the 1st of June. Mr. Henry Stecla is still feeding; has 140 colonies and is doubling back. Mr. M. A. Garrett all right with 35 colonies. I extracted half a barrel. Our thermometer stood at 84° on the 28th and 29th. I send you by mail two specimen flowers of honey plants; the yellow tassel comes from a tree which grows here in the South. It is said that it was introduced from China many years ago. The other I found by the road side; the bees were fighting over the nectar which it contains. What are their names? CHAS. SONNEMANN.

New Iberia, La., May 30, 1882.

[The yellow tassel mentioned above is from the tree commonly called China oak (*Quercus Chinensis*); the latter we have many times recommended as a most desirable honey plant—motherwort.—ED.]

Loss of Queen.—There are a great many causes for loss of queens, but I think I had an experience somewhat different from anything read or heard of. I had a small frame of brood, 4x10 inches, inclosed in a small box with glass sides, covered with sliding panels for observation, in which I had a queen hatch on the 15th of last August. She was large and nice, and was perfectly contented with her small home until the 20th of August, when at 1 o'clock she took a bridal flight and was out two hours, when she returned. I was standing on the look-out, and saw her enter the hive, and I immediately raised the panels from over the glass and saw at once that the bees had caught her and were tearing away the white thread-like appendage which was hanging to her when she returned to the hive. I watched the proceedings until I was satisfied they intended her destruction, as they had her by the wings and legs, and were using every effort to sting her, while the whole colony was in an uproar, and by this time they had taken every visible thing away from her that did not belong there, yet they persisted in her destruction until I had recourse to my smoker, and then it was hard to make them desist, until I could take her out, which I did until they were quieted inside the hive, when I returned her; but the same hostility existed, and I smoked the bees until they were as black as a chimney sweep, and all to no purpose. Then I removed her and introduced her into another small hive, and she proved to be a perfect queen, producing workers and drones at will. What was the trouble? Was it the scent of the drone she met that caused the bees to attack her, or do all queens have to go through with this pow-wow on such occasions? If (and I shall never doubt it) they intended to kill her, does this not account for the loss of a great many queens? WM. M. BARNES.

Boaz, Wis.

[The circumstance you mention is a matter of not in frequent occurrence. We have heretofore supposed that the queen having been out an unusual length of time, had probably been deprived of her scent by long continuance in the open air, then having met a foreign drone, and returning immediately to the hive after contact with him, the bees may have mistaken her for an intruder. Had you, after her first release, put her under a comb-surface cage and placed the comb back in the center of the hive, she would have been fraternally welcomed after a few hours confinement. We had a fine young Syrian queen pass such an ordeal last summer, in which one wing was disabled, but after caging on the comb from one o'clock until evening, she experienced no further trouble.—ED.]

Have Dwindled.—Mr. G. M. Doolittle's spring report is my experience to a dot. In the fall of 1880 I put 35 colonies in my cellar, and in the spring, about the 20th of April, set out 34. Some of these I united, so that I had 24 good colonies, and 7 that I built up to good by fall. From the 24 that I worked for honey, I obtained 830 lbs. of box honey, in 1¾ lb. sections, and 200 pounds of extracted honey, besides what we used in the family and gave to the neighbors. Last winter was a very mild one here, and my bees used very little honey while in the cellar, but there came a warm spell about the middle of April, and I set them out, and—oh dear! how they have gone down ever since. I put 53 colonies in last fall, and set out 49 this spring. All appeared good, but it turned around cold in a couple of days, and my bees had only 4 days in April that they could fly, while May has not been much better. The little fellows tried their best to get out and work on soft maple and willow, but they dropped down and died, many of them on the alighting boards. I looked them all over the first warm day in May, and most of them had honey plenty; those that did not I gave combs of honey saved over on purpose for such emergencies, but in spite of all I could do, they have dwindled, died, and swarmed out, and with what I have united, I have 36 good and 2 poor colonies to begin the season with, if we ever get any warm weather so bees can work. Fruit is in full bloom here now, and the bees would be very busy, but it has rained most of the time for two weeks, and been so cold they could not do much. The heavy colonies are breeding up fast, but it seems up-hill work for the light ones to get started. My Italians died off and spring dwindled more than the natives. I think the coming bee will be pure Italian and pure German brown bees crossed. Such of mine are larger, stronger and do not die or dwindle. R. P. LOVEJOY.

Greig, N. Y., June 5, 1882.

Negroes as Bee-Keepers.—1. How far can bees see? 2. Why do negroes not keep bees; is it because

"The Lord doth love the negroes well,
And he always tells them by their smell?"

I have never known a negro who owned bees. E. C. JORDAN.

Stephenson's Depot, W. Va.

[1. How far bees can see we do not know. Worker bees are supplied with two sets of eyes—compound or ocelli, and simple eyes. Prof. Cook doubts not their eyes are best suited to long distances, as they depend more upon their keen sense of smell to guide them aright when the object is present. We have often thought one set of eyes might be adapted to a very distant range, while the other set were adapted to perfect observation in the dark, as we know much, and perhaps the most perfect of their work, is performed in the hive at night amid total darkness. Who that has passed through an apiary at midnight during a season of bountiful honey flow, has not heard the busy *roaring* of the bees within the hive, though several rods away.

2. We never saw nor heard of a negro who was a successful bee-keeper; and although excessively fond of honey, nine hundred and ninety-nine out of every thousand, would do without it, even if told to go to the hive and help themselves.—ED.]

Working Drones.—As I write, a neighbor has just called in to ask if drones worked. I replied, no. He affirmed that he had witnessed a colony, the drones of which were at work carrying in pollen as busy as the workers. The same colony have been killing off the drones since. I replied that it was an exception. What think you of it? Our bees have had a good spring harvest; working almost incessantly for 3 months, while yours have been frequently interrupted with frost and freezes. I am informed by a neighbor just from your city, that it was snowing there on the 23d, yesterday week. W. A. MILLING.

Biard, Tex., May 31, 1882.

[There must be some mistake about the drones carrying in pollen.—ED.]

Too Cold and Wet.—I had last fall 12 colonies which wintered well and strong, but they have dwindled badly this spring, causing the loss of one. Most of them have but three frames of brood. There is not much show now for honey until fall or late summer. The weather is too cold and wet for bees to work much on what bloom there is. That open letter to Doolittle hits me exactly. I hope he will give a reply soon. I use hives holding 10 frames, 11½x12½ inches inside. 1. For extracting honey should I have an upper story to get the best results, or is the one story roomy enough? 2. I tried sections a little last year, but the bees did not go up at all; why? 3. Are there any bees that can gather honey from red clover; mine do not? PAGE.

Shenandoah, Iowa, June 3, 1882.

[You will find Mr. Doolittle's answer to Dr. James' open letter, which was published in the BEE JOURNAL, page 329, in this number, on page 372.

1. For extracting we prefer the second story, as it gives an opportunity for tiering up, to meet exigencies of weather or time, and for ripening honey, when flow is very abundant. If but one story is used, then a "long idea" hive is often desirable, as with a very prolific queen, if but 10 frames are used, the labor of extracting will have to be continually in progress, or a light yield will be the result.

2. Your honey flow may have been very light, or the bees been too long storing in the brood chamber. Sections should be put on early in the season, if comb honey is wanted; that is, soon as the weather has become warm and settled.

3. There are several who claim their bees gather freely from red clover. We have frequently seen our bees working busily on it, but never when the flow was plentiful from other honey plants, nor do we believe any bees will do so.—ED.]

Putting on Sections.—In your answer to D. W. Bellemey on page 331, question 4, your advise and my experience do not agree. I used to do as you advise, but found sometimes a difficulty in getting the bees into the sections after they commenced to store honey in the combs below. I now put on the boxes as soon as the bees have clustered below. Swarms thus treated have, as a rule, given a large yield of section honey. If not done within 24 hours, the bees will put so much honey in the brood combs as to materially interfere with the brood, leaving insufficient room for the queen. If honey is what we are striving for, on this point hangs success or failure. I hope other bee-keepers will give their practice on this (to me) important point. L. C. WHITING.

East Saginaw, Mich.

Boiling Honey.—My bees bred up very fast in fruit bloom season, and some time after that it set in cool and cloudy, with bad weather to gather honey to keep up brood rearing. I feared very much that I would have to feed largely, but now they are making a living, and have commenced to fill up with brood. Will Mr. Lowmaster please give a description of his drone trap, as I find it very hard to keep down black drones? I have 58 colonies of blacks, hybrids and Italians, and do not use any black drones? My bees wintered well on their summer stands in Mitchell hives. How will it do to let extracted honey stand 10 or 15 days, then bring it to the boil in large kettles, skim, put up in 2 to 4 pound tin cans, and solder while hot?

J. T. Bruton.

Joplin, Mo., May 24, 1882.

[Without exceeding great care is used, the honey will be deprived of much of its flavor by bringing to the boiling point. Let it stand several days in tubs, pails, or barrels, covered only with thin, coarse cotton cloth, in a hot, dry room, or exposed in the sun. Protect against rain and night dews.—Ed.]

An Open Letter to Prof. Cook.—Dear Sir: While you are under the firm conviction that the breeding of bees must follow the same laws as the breeding of cattle, etc., and that I concur with the opinion of Mr. Doolittle, who says in a late number of *Gleanings*, that from his practical experience he has been led to believe that the breeding of bees is not analogous to that of swine, sheep, etc., I would like for you to tell us in which way we are able to come to the same result with bees as with cattle, etc.? If it is possible to select the male and female with the different breed we wish to improve, how is this possible with bees? We certainly can select the female, but what about the male? Now, we suppose that all the progeny from a pure queen to have similar qualities, now why is this not so with the improved breed of cattle, horses, etc.? The breeders of the selected stocks are continually weeding, as from their best selected couple they breed from there are but a few which come to the standard. Now, if this is the case when we are able to select and manage the male, how can we attain such results, when we can only have drones and not one, unless all the drones from the queen we select for that purpose have all the good similar qualities required; then, if this is the case, why should all the males from a female bee have all the same qualities and not so in all the different improved breeds of cattle, horses, sheep, fowls, etc.? Trusting, sir, that you will not think that I oppose the working towards the improving of our present bee, though I have been working in that light for several years without result.

Paul L. Viallon.

Bayou Goula, La., May 30, 1882.

Late Spring.—The spring has been very late; cold north and northwest winds are prevailing yet, so bees cannot work much more than half of their time. I received a large swarm May 26, which is doing well considering the chance. I expect more soon as the weather permits. 1. How is the best way to move a colony a short distance; it is standing under an apple tree, and has too much shade? 2. In putting tin tubes in the brood chamber, for winter passages, should they be removed in summer? I am delighted with "Cook's Manual of the Apiary." I think there is no book like it for the bee-keeper. Do not stop the Bee Journal, if my subscription should expire; I am a novice at bee-keeping, and cannot get along without it.

S. C. Frederick.

Coal Vale, Kans., June 4, 1882.

[1. Close the entrance at night; in the morning remove the colony to where you wish it to remain; let the entrance remain closed; about 11 o'clock jar the hive pretty roughly, and leave it for about 5 to 10 minutes; slant a board in front to nearly obstruct the entrance, and take away the entrance blocks. Let the board remain in front for several days.

2. Why use tin tubes at all? Shave a ½ or ¾ inch round stick gradually to a point, and pierce a hole through each comb just a little above and forward of the center. If done in the fall, the bees will not close them again, and in the spring they can easily do so, as this is the most valuable portion of the brood-nest.—Ed.]

Beetles.—I send you this day three dark-colored bugs that frequent my bee-hives, and annoy the bees. Will you please let us know what they are, and their habits, if known, and do so through the Bee Journal.

J. A. P. Fancher.

Fancher's Mills, Tenn.

[The "dark colored bugs" received from J. A. P. Fancher, Fancher's Mills, Tenn., are not bugs, but beetles. They are not found in Michigan, but are in our cabinet. The scientific name is *Euryomia sepulchralis*, Fab. Two near relatives, *E. inda* and *E. melancholis*, are found here, and are often found eating into ripe fruit, especially apples and peaches. Possibly this one has a sugar tooth, and seeks to satisfy its longings by pilfering the honey from the hive. I cannot think, from the habits of the beetles of this genus, that they could do any other injury. We might think from the name that they were after dead bees, but it is hardly possible. They doubtless seek the honey, and will not be in sufficient numbers to do much harm.—A. J. Cook.]

Hiving, Etc.—1. To hive a swarm, should I turn the hive top-side down over the swarm, after the frames have been fastened in place by cleats laid on the ends, and fastened by screws driven through the cleats into the rabbets? 2. My thin foundation is cut into sheets 5½x12 inches, to fill the 1 pound section, should I cut it into sheets 3½x3½ inches, and have a lot of small pieces left over, or had I better cut it into pieces 3x2¾ inches? 3. I use cotton rags in my 2½ inch Bingham smoker, and like them much better than punk; what objection is there to using rags? 4. According to Mr. Heddon's theory, I wonder if bacteria are in cider and honey vinegar; if not, what causes fermentation? In an 8-frame Langstroth hive, I should think we might adjust a super for extracted honey, and after the bees are well at work raise this super and put under it a super of 24 one-pound sections, with foundation and no separators. The weather is very backward here. Fruit trees are just leaving out.

F. M. Cheney.

South Sutton, N. H., May 27, 1882.

[1. To hive a swarm, place a hive where intended to stand, with foundation frames properly adjusted; slant a broad board in front, on which the bees can crawl up to the entrance; now shake the cluster into an empty box or keg, and pour them down in front of the prepared hive. There are two or three other good methods, but this is, perhaps, as little trouble as any.

2. Cut into pieces 3x2¾ inches.

3. There is no objection to cotton rags in the smoker, except that they burn out quite soon.

4. Yes; bacteria prevail in everything that ferments or decays.

By using additional stories, tiering up is practiced to a considerable extent, both for extracted and comb honey.—Ed.]

Bees Doing Well in California.—Our bees are storing honey very fast, and the prospects for a booming good yield of honey are much better than last year at this time. Sage, honeysuckle and California coffee are all in full bloom, and the weather is mild, enabling the bees to work all day. Wild buckwheat is just coming on, and other bloom in rotation. We feel safe to say that our honey harvest will be larger than for the past two years.

Bray & Seacord.

Warthan, Cal., May 29, 1882.

Prospect was Never Better.—The season has been very cold and wet here. White clover is beginning to bloom, and the bees are making good use of it, as they did not get much honey from fruit bloom. Bees wintered well, and are doing finely now. The prospect for a good clover crop was never better, I think, than now.

Daniel Brothers.

Sarahsville, O., June 3, 1882.

Phenomenal.—Recently while looking over my bees, on opening a hive and picking up a frame with brood, I discovered a ball of bees which I could not understand. On separating them I found they were balling their queen—one that had wintered with them. I liberated her, but they followed her like a lot of wolves and attacked her again. I took her out and caged her. They had no other queen or any cell from which one could have hatched. Can you tell me the cause of such a phenomenon? I I have had bees many years in Langstroth hives, and thought I had seen all the freaks bees are subject to, but this one beat me. The queen was stung so badly she died in a short time. The same colony is without a queen yet. I put into winter quarters 47 colonies, and took out 46. They have gathered a little honey from fruit blossoms, but the weather was so cold it was mostly a failure, and bees are now starving. I have fed a few. It rains every other day and is cold. F. H. FINCH.

Sharon Center, O. May 15, 1882.

[If it were not that there was late brood in the hive, we would think the bees had some cause to supersede her; otherwise, it may have been a queen that gained admission to the hive and killed the one belonging there, after which the bees attacked her. Possibly an abnormal swarm, with their queen, entered the hive, and after destroying the queen proper, were forced out, leaving the intruding queen in custody. Being a phenomenon, of course there is no arbitrary way of accounting for it.—ED.]

Good Increase.—I had 18 colonies at the beginning of the season, all in fine condition; have now 38 increase by natural swarming. First swarm March 29th; had 18 up to the 18th of April; had a rest of 28 days, and the others came out since. Had one swarm this morning, at 7 o'clock. In my 8 years of bee-keeping I never before had a swarm before May, nor as early as 7 o'clock a. m. Honey flow is immense from thistle and horsemint. Brood chambers are all full and boxes and upper stories on 34 hives. E. P. MASSEY.

Waco, Tex., May 29, 1882.

Upward Ventilation.—Since my last report the weather has been very unfavorable for the production of honey. We have had a great deal of rain, with low temperature. I never knew a cooler spring. We are just beginning to have warm weather in earnest, and the bees are gathering honey freely from white clover. I have taken off 1,200 lbs. extracted honey from a commencement of 256 colonies. I shall work 4-5 of my colonies for extracted honey. When I find my bees hanging out, with front and side entrances entirely open, I elevate the rear of the top of the hive and fold back a corner of the sheet from the Langstroth frames to the extent of 3 or 4 inches, giving free circulation from top to bottom. It acts like a charm, and the bees are soon at work again. O. M. BLANTON.

Greenville, Miss., May 22, 1882.

Kingbirds. — The bird mentioned by your Canada correspondent for a name, on page 347, is called kingbird, in this section. I believe that is the name by which they are generally known in the States. They are insectiverous, and considered very destructive to bees. Some have claimed that they destroy drones only, but that is a mistake, as has been proved.

CLARENDON BUTMAN.

Plymouth, Me.

[Kingbirds are numerous—too numerous—in the Central and Western States, with which we are familiar; but we have none decked in such feathers as the few which were sent us by Mr. Sanderson.—ED.]

Doing Fine in Texas.—My bees are doing better, and making finer honey than I have ever before seen in Texas. They began swarming on March 10th. I then had 80 colonies. I now have 150, in Adair and Langstroth hives. The bees are very strong. I am busy now taking honey—commenced May 15th. I find it all nicely sealed. Horsemint is splendid this spring. I think it the best honey plant we have. Corn tassels are fine. We are eating roasting ears. The prospects are grand for Texas this year.

S. M. COCHRANE.

Gonzales, Texas, May 29, 1882.

Disappointments. — We had the warmest winter I ever saw up to April 9, then set in cold and windy, so my bees could not work to do any good, all through April and May, with rains every 3 days, and then cold again. Bees strong and in fine shape, and a hundred acres of white clover in sight of my apiary, and gallons of honey wasting. I had 7 swarms; lost 3 queens this spring, and if the weather does not get better I fear our honey crop will be very light. My bees have done well considering the time they could work; a good many of the boxes are full of comb and partly filled with honey, and if we could have some dry, warm weather, they would soon do to take off, but to-day is cold, cloudy and windy, with mercury standing at 50° in the shade.

L. T. MOBBERLY.

Long Grove, Ky., June 5, 1882.

Myrrh on Bee Stings.—We feel to give Mr. R. L. Aylor, of Waterloo, Ky., our sincere thanks for his sting remedy, which is a few drops of tincture of Myrrh applied to the puncture. This is the best thing we have found. We have 52 colonies in good condition; the weaker ones have been greatly improved by following Mr. G. M. Doolittle's plan of strengthening and doubling up. No honey or swarming as yet. DANIEL & MARY MOHR.

Manchester, Iowa, June 7.

Bad for Queen Rearing.—Clover is largely a failure here—wet and cold so long it is dwarfed; very fine stalked and bloom light. Bees are getting little honey for two days past. Have had three clear days now. Have got about 20 queens fertilized and 100 lost in flight; saw a number return and fall on the ground, not able to enter the hives. Such were unsuccessful in their flight. Some came out after 3 weeks' confinement in the hive on the first warm day and were successful; but bees would not receive them on their return, but damaged some and killed others. A. SALISBURY.

Camargo, Ill., June 8, 1882.

Backward, Cold and Wet.—We have a very backward, cold, wet season so far; hard on our bees. I fear we will not get much honey this season. I have had two swarms of Italians this season; the first on the 10th of May, the second on the 25th, both from the same hive. It set in so wet and cold immediately, that I was afraid they would starve, so I fed them in the upper story, and happened to not put on the cover right when the other bees commenced robbing them the first thing I knew, so I smoked them in and shut up the hives, loaded them into my buggy and moved them away about 3 miles to my son-in-law's, where I opened them up and they seem to be doing well. It effectually stopped the robbing. J. BREWER.

Lincolnville, Ind., June 6, 1882.

Doing a "Land Office Business."—Bees are doing a "land office business" here to-day. The spring has been so cold and wet heretofore that many bees have died of starvation. I think mine will be all right now, as I have been feeding sugar and honey.

THOS. LASHBROOK.

Waverly, Iowa, June 5, 1882.

Interesting.—Below are the dates for this year of the flowering of some bee plants and trees in this locality; also the time of drones flying and commencement of natural swarming. Latitude of this locality, 37°, 45'; long. W. from Washington 10°, 35'. Such a table as below from different parts of the country would be of much interest to bee-keepers: March 31—Peach and plum trees dropping their bloom; drones commenced flying; pears coming in bloom. April 2.—Cherries and apples beginning to bloom; 22—White clover beginning to bloom; 24—Locust beginning to bloom. May 1—Tulip tree and raspberry beginning to bloom; 11—Natural swarming commencing; 25—Catalpa beginning to bloom. June 4—Raspberry nearly out of bloom; tulip tree about ten days out of bloom; catalpa dropping bloom; locust was in bloom about a week. Bees worked well on fruit tree bloom, sugar maple, tulip tree and raspberry; indifferently well on locust, white oak, black (sour) gum, and red-bud (Judas tree); not at all on catalpa. They have not put a great deal of force on white clover as yet, preferring raspberry.

GASTON M. ALVES.

Henderson, Ky., June 4, 1882.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance. Special Notices, 50 cents per line.

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For **4** weeks		**10**	per cent. discount.
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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

◆

☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., June 12, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—As the season is well advanced, sales of extracted honey are slow and prices remain unchanged. I am paying 7c. for dark and 9c. for light, cash on arrival. Good comb honey is scarce and rules high.

BEESWAX—I am paying 24c. for good yellow wax, on arrival; 18@22c. for medium grade, and 15@17c, for dark.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand for extracted honey, in the retail way, is fair, and our sales for manufacturing purposes were very good of late. We pay 7@9c. on arrival. Prices for comb honey nominal and demand slow.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for honey is light, most of the trade finding fault with the best offered, as it is more or less candied. Values are not steady, prices being made to meet the views of the purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—There are a good many small lots of very nice white section honey coming in now from time to time. White sells readily at 22c.; second quality 18@20c. Buckwheat, no sale at any price. Extracted, none in market.

BEESWAX—25@30c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—New honey is reported as being received at Southern points, but none has yet arrived in this market. Stocks of old are now quite insignificant. Fair to good qualities, particularly extracted, are in demand.

We quote white comb, 13@14c.; dark to good, 7@11c. Extracted, choice to extra white, 7¾@8¼c.; dark and candied, 6¼@6¾c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

NEW YORK.

HONEY—Scarcely anything doing in honey, and prices are entirely nominal. White clover, fancy, 1 lb. bxs., 15@16c.; white clover, good to choice, 1 and 2 lb. bxs., 13@14c; buckwheat, 2 lb. bxs., per lb., 11@12c. Extracted and strained, white, 9@10c; dark 7@8c.

BEESWAX—The market continues rather quiet, but the supply is light and prices firmly sustained. Western, pure, 24@24½c.; Southern pure, 25@25½c.

D. W. QUINBY, 105 Park Place.

ST. LOUIS.

HONEY—In fair demand. Strained selling at 8@10c.; comb scarce—nominal at 18@22c.

BEESWAX—Prime in demand at 22@23c.

R. C. GREER & CO., 117 N. Main Street.

◆

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

Local Convention Directory.

1882. *Time and Place of Meeting.*

July 25—Western Iowa, at Winterset, Iowa.
Henry Wallace, Sec., Winterset, Iowa.
Aug. 10—Maine State, at Harmony, Maine.
Wm. Hoyt, Sec.
Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill,
Jonathan Stewart, Sec.
Oct. 5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.
Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

From Detroit to the Sea.—W. H. Brearley, of the *Detroit Evening News*, has issued and sent to this office a copy of his new tourists' guide book for the three $20 July excursions "From Detroit to the Sea," and return, via the Grand Trunk R. R. The book is a decided improvement upon the former issues published annually during the six years that these excursions have been carried on, having 64 well edited and illustrated pages, and containing 43 maps engraved expressly for this year's edition. The title page of the cover is an exact copy in 10 colors of an oil painting of Glen Ellis Falls, near the Glen House, in the White Mountains, and is beautiful enough to frame. Every one contemplating a trip East this summer whether they intend going on these excursions or not, should send 30 cents and secure one. Those who do not wish to invest ten three cent stamps, in this guide book, should send one stamp for a circular.

Class in Bee-Keeping.

Application has been made to me to take students in Bee Keeping. I have, therefore, determined to begin a class on MONDAY, JULY 10, and extend through eight weeks. The instruction will include a study of the Anatomy and Physiology of the Bee, Queen-Rearing, Artificial Increase, Implements, Comb Honey, Extracted Honey, Bee Pasturage, Wintering, etc.

I have a good library of Bee Literature, all Approved Modern Appliances, etc. My home Apiary has eighty colonies of Italian Bees, among which students can practice.

O. CLUTE,
Iowa City, Iowa.
24w

JULY AND AUGUST, I will sell Italian Bees, in Simplicity hives, for $6 per colony. All queens from imported mothers. Safe arrival and satisfaction guaranteed.

D. S. BASSETT,
24w1tp Farnumsville, Worcester Co., Mass.

IN DISTRESS for want of Beeswax. We are now paying 26c. cash, or 28c. trade, for good yellow wax. Those of our friends who want large lots of foundation from us will have to send us the same amount of wax or wait till we can collect it, as our stock is about exhausted. Until further notice, we will sell thin foundation for sections at 55c. per lb.; heavy foundation for brood combs at 43c. No discount from the above rates.
23w4t G. W. STANLEY & BRO., Wyoming, N. Y.

100 Colonies

FOR SALE. ALSO,

TESTED AND DOLLAR QUEENS

AND

BEES BY THE POUND.

Send address for prices.
1w35t **JAMES HEDDON,** Dowagiac, Mich.

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.
1w1y **D. S. GIVEN & C.,** Hoopeston, Ill.

1882-J. S. TADLOCK.-1882

LULING, CALDWELL CO., TEXAS.

Breeder of Pure Italian Queens. I use one of J. H. Nellis' best imported queens. Tested Queen, $2.50; per half-dozen, $13.50. Select Tested, $3; per half-dozen, $16. No "Dollar" or nuclei-queens handled. Safe arrival and satisfaction guaranteed, if possible. 14w39t

1882.-ITALIAN QUEENS.-1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby Smoker for $1.50. Address all orders to

L. J. DIEHL,
(Money Order Office)—Butler, Dekalb Co., Ind.
10wtf

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
13wtf Abronia, Mich.

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

—"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Comb foundation on Dunham machine, 25 lbs. or over, 35c. per lb.; on Root machine, thin, for boxes, 40c. per lb. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1w1y.

PRIZE QUEENS FOR 1882,

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen....................$4.50
2 frame Nucleus, with Tested Queen.................... 5.00
Full Colony, with Tested Queen, before July 1......12.00
Same, after July 1...........10.00
Tested Queen, before July 1, 3.00
" " after July 1.. 2.50
" " per half doz., after July 1..................13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,
1wtf Burlington, Iowa.

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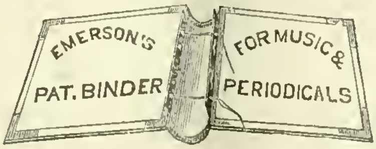
AND KEEP THEM

NEAT AND CLEAN.



The Emerson Binder

IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Bee Journal of 1880..................**50c.**
For Bee Journal of 1881.... ....**85c.**
For Bee Journal of 1882.................**75c.**

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

4—RACES OF BEES—4

Italian, Cyprian, Holy Land and Hungarian Queens.—Warranted queens, $1.50; extra selected, $1.75; tested, $2. Send for my **21st Annual Circular.**
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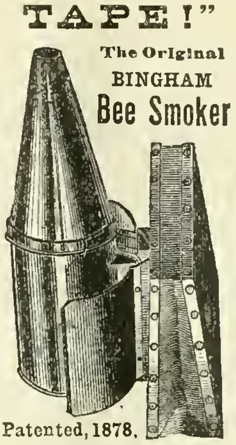
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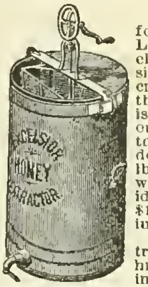

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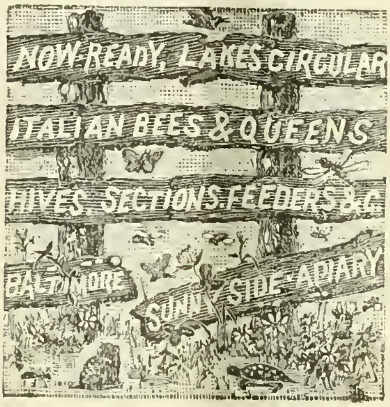

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.................................... 385
A Clever Scheme 385
Who Gets the Profits?.............................. 386
Glucose in California.............................. 386

Among Our Exchanges—

Bees in California.................................. 387
Use of the Honey Extractor 387

Convention Notes—

Western Iowa Convention 387

Correspondence—

The Non-Progressive Bee-Keeper.......... 388
My Opinion of Cyprian Bees....................... 388
Care of Comb Honey—No. 3........................ 390
The Wintering Problem............................. 391
Reply to Mr. P. L. Viallon 392
A Visit to the Texas Convention.................. 393
The Dollar Queen Traffic.......................... 393
Texas Letter—Italian Bees Wanted.............. 394

Selections from Our Letter Box—

But Two or Three Warm Days..................... 395
Madeira Wine.. 395
Buckeye Honey....................................... 395
Outlook has Never been Better 395
Good following Bad 395
Doing Well on White Clover 395
Something New 396
Scientific Pleasantry............................... 396
Splendid Prospects................................. 396
Honey Locust 396
No Nectar... 396
Rain Needed 396

Business Notices—

Honey and Beeswax Market........................ 396
Premiums...... 396
The Apiary Register................................ 397

A Clever Scheme.—Messrs. Williamson & Bro., a very enterprising firm of Lexington, Ky., have ordered 500 copies of "Honey as Food and Medicine," with their business card in detail printed on the page following the title, in addition to a display card on the first page of cover. They are quite extensive dealers in honey, in addition to their supply business, and will find this the most practical, as well as the cheapest method of reaching both producers and consumers. In lots of 500 or 1,000 we can make a still further discount from dozen rates, and parties ordering can have their card printed in their local printing office if they desire. As we have the plates electrotyped, we can fill orders for large quantities very speedily.

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☞ The McGregor, Iowa, *News* says: "The publisher of the AMERICAN BEE JOURNAL may well be proud of its great success. The honey and bee business during the past year was not encouraging in some localities, but Thos. G. Newman is not a man to be dismayed by one bad year. The BEE JOURNAL will continue its weekly flights.

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☞ "Leaves from my Portfolio" is the title of a book of about 250 pages, by the Rev. W. K. Burr, M. A., of Belleville, Ontario, Canada, a copy of which we have received from the author who is an ardent apiculturist, and a constant reader of the BEE JOURNAL. It contains many literary gems, and is a valuable addition to our library.

☞ We regret to hear that a large shipment of queen bees, on the way from the Island of Cyprus to Mr. D. A. Jones, of Beeton, Ontario, were caught among the icebergs in the Gulf of St. Lawrence, and all but two perished by its chilling power. This is a great loss, it being the first importation this season from Mr. Frank Benton, who has charge of Mr. Jones' apiary in Cyprus..

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☞ An immensity of white clover bloom is developing itself everywhere, and the linden trees are very full of buds. Propitious weather is all that is needed for a large honey harvest.

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☞ We have received a copy of the Cornell University Register for 1881-2. The next term commences Sept. 19. The department of agriculture is quite a feature of this Institution, and the advantages it offers are within the reach of every man who has made good use of the instruction afforded in the public schools. The fee for tuition is $25 a term. It is located at Ithaca, N. Y.

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☞ Since the death of Mr. James Vick, of Rochester, N. Y., we learn that his large seed business is to be conducted by his four sons—the oldest of whom is named "James Vick." All of them have been educated in the business from boyhood. We hope they will worthily wear the mantle of their late father, and manage the vast business with the same excellent judgment which he displayed throughout all its departments.

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☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

Who Gets the Profits?

The *California Apiculturist* for June has the following excellent article, and excepting one or two trifling inaccuracies, it is well worth consideration by every honey producer in that sun-gladdened State:

> That there is a large profit made on honey by some one, is quite evident from facts that cannot be denied. That the bee-keeper does not make it is also evident, and only needs past experience to establish the fact.
>
> We are reliably informed by residents in many of the eastern and western States, that when they purchase our honey there at retail they pay from 20 to 40 cents per pound for it. Dealers in San Francisco pay from 5 to 7 cents for it, and then deduct the weight of the cans at that, leaving the producer from 4 to 5 cents per pound, after deducting freight and all other expenses. Now, *who gets the profits?* There is a profit from 15 to 30 cents somewhere, and this is not all. The San Francisco dealers often sell and reserve the cans, or repack in small packages in order to secure a larger gain, and then sell the original packages back to the producer, after having robbed him of them. This imposition has been, and is undoubtedly practiced now. The apiculturists of Southern California have openly and publicly denounced this unfairness and have asked, through their associations throughout the honey districts of the State, that a reasonable tare be adopted on cases commonly used for 60 lb. cans, which would be from 12 lbs. to 14 lbs., but their requests have been disregarded, and a tare of 16 lbs. to 18 lbs. has been exacted, these tares including the cans.
>
> These honey dealers doubtless have a ring and fix their own prices, as have the fruit packers and other dealers done. Nine-tenths of the honey producers in this part of the State are dissatisfied with the San Francisco market and are determined to ship around it to some other market. European dealers are making bids for our products, and many will try the experiment there this season. Shipments made to many of our eastern cities have been much more profitable than those made to San Francisco. No deduction for packages are made outside of San Francisco, as far as we have been able to learn. When the retailer sells our honey or other canned goods, he does not deduct the weight of the cans. Why this exaction from the honey producer? It is evidently a gross injustice that should not be tolerated.
>
> Until a different system of marketing honey is adopted impositions of this kind will be practiced by the swindling rings that control the market. Why is it that the eastern bee-keepers get a remunerative price for their honey? The reason is plain, they place their honey upon the market in an attractive form—in small packages, neatly labeled. By the small package system they reach the consumer in a more direct manner, thus avoiding the middlemen to a great extent. When we adopt the same system we will avoid swindlers and break up the rings.

The trifling inaccuracies to which we referred above, are the prices at which California honey usually retails here. For honey in sections they generally rule at about 20 to 30 cents, and extracted retails at about 15 to 20 cents; of course, this is strictly at retail, and not in job lots, which are much lower sometimes. But in the main, the sentiments of the article are correct.

In view of the complications likely to arise, and which had already arisen, the BEE JOURNAL long ago urged upon bee-keepers the necessity for adopting small kegs in making their shipments to distant markets, and the desirableness of 1 lb., 2½ lb., 5 lb., and 10 lb. tin pails, always neatly and tastefully labeled, and with the name of the producer prominently printed thereon, where intended for retailing to the consumer direct, not only as a practical method of advertising, but as a guarantee to the consumer of the genuineness of the article; and it is a gratification to allude to the happy results which have been obtained by following the course we suggested. Many progressive bee-keepers are realizing remunerative profits and rapid sales, where formerly their product was a drug on the market, and their returns anything but satisfactory. Where a good, neat package of honey has been sold once at a reasonable price, it is not a difficult matter to sell it again.

We have always deplored the employment of middle-men where it was possible to dispense with them. Their time is valuable—much more so, usually, than that of the bee-keeper or other producer—their expenses for clerk hire, storage, rent, etc., are large—a considerable capital is required for the successful prosecution of a commission or brokerage business, for advances to be made and goods lying idle, earning nothing—and all this must be paid by the producer eventually. The commission man, if honest, will look to the consignor's interest; if prudent, will look to his own, and all are prudent. His own percentages must be realized, though the shipper be bankrupted; claims of the consumer for tare must be rebated, though the producer knows his own scales to be correct, and cooperage claims must be allowed, though the shipper was never so careful.

The producer should always be willing to allow an *honest* tare, for if a package be represented to contain a certain number of pounds, it should not fall short one ounce, rather, an ounce over; but he should carefully weigh the keg or pail before filling, and afterward firmly resist any extortion for tare when selling.

Avoid rings if possible. They are usually of no benefit to anybody but themselves, and are always organized to encompass some one, either producer or consumer. The interests of producers and consumers are to a great extent identical; those of the middle-men are antagonistic to one class, and sometimes both. We are not of opinion that they are dishonest or unfair in their transactions, but with them business *is* business, and the bulk of the net profit from produce of any kind, most usually remains in their own pockets.

Glucose in California.

The *Apiculturist* is evidently in earnest in assuming to forward the interests of bee-keepers in California, and every person in that State, who is dependent upon apiculture, should give that paper a generous support, and, if necessary, strain a point to sustain it. The following spirited article appeared in the June number:

> It is beginning to be doubted whether the cans of "honey" put up by the fruit canneries of San Francisco contain the genuine article. The member of our company living near San Francisco has heard reports that men who have worked in some of these factories say that they *do* use glucose to mix with the honey they buy at a sacrifice from the produce dealers of San Francisco. A bee-keeper, in writing to our associate, says that he has seen any number of barrels of glucose in front of fruit canning establishments in San Francisco. The associate editor has seen 2 lb. unsealed covered cans of honey offered in stores in and about Oakland that sell for 30 cents apiece. On asking if they contained pure honey he was told that "it did not make much difference whether it was or not, so long as consumers could not tell the difference." It seems to us that these factories would not care to can pure honey, for, as is well known, they are for making large profits. If the above statements are true, it is time the practice was stopped. The managers of this journal are about seeking evidence on this score and will, if they are able to make out a case, have complaints sworn out against the violators of the law. It is time that the apiarists put their

honey on the market in their own small packages and reap the profits.

We hope the determination expressed to investigate the matter, and if glucose has been used in honey, to institute legal proceedings, will prove no idle boast, but that the law will be enforced to the fullest extent. Bee-keepers in California owe it to themselves to sustain the *Apiculturist* in its efforts to elevate the standard of their honey.

It has become a fixed maxim in the Eastern, Northern, and Central States, that pure honey will granulate to a greater or less extent, and with this as a test, it is becoming an easy matter to dispose of pure extracted honey at all seasons; but California honey has become more difficult of sale, because of its usual liquid state, and the claim put forth that it does not granulate. Its most extensive sale in our Eastern markets has been to unprincipled parties, who have bought it solely with a view to mixing with glucose syrup, and retailing as "strained" honey. With a pure article, put up in neat, popular packages, there will be no necessity for California apiarists to discount the prices of any other country in the world.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Bees in California.—Mr. J. E. Pleasants, in the *California Apiculturist*, gives the following item on the present prospect for honey in that State:

> It were useless to deny that the frequent drouths which have been experienced in the last few years have a discouraging look for the business, but a man can scarcely be called wise who neglects to gain wisdom from his failures, and disasters are often of value in the way of experience, and many a lesson has the *pobre abejero* learnt from the drouths which, even in this muchly favored country, he is freely treated to.
>
> In the last 7 years there have been two total failures in the business—1877 and 1879, and a partial one in 1880. As a natural consequence, many who were engaged in this pursuit got very much behind financially, and they were looked upon with pity for being so simple as to be engaged in such a precarious occupation, and the question was often asked of the poor bee-keeper by thoughtless ones, "Why don't you have an orange orchard, or a vine yard, such business' pay much better all the time?" The prudent bee-keeper thinks of the wise proverb, "Speech is silver—silence is gold," and refrains. If he would, he could say: "There is no human undertaking that is certain. In this vale of tears every occupation has its lights and shadows, and our turn will eventually come." It has come. The future now looks very bright for the bee-keeper. He has had a long rest of more than a year, therefore he is more than ready to put on his visor, and buckle on his armor, and go into service with renewed strength and vigor, for his prospects are very encouraging. The yield of honey will be large judging from appearances up to date.

The editor of the *California Apiculturist* adds his testimony as follows:

> The season, as we have heretofore stated would be late, in consequence of the late rains. In our locality, as in many others, the sages, wild alfalfa and other leading honey plants are now beginning to bloom, and the bees have commenced storing surplus honey. We are informed that in other localities bees have not commenced to swarm, which may be attributed to their weak condition, and that some apiarists are discouraged and are rendering their surplus comb into wax. In our own apiary our bees are storing honey well, considering the season, which we fear will fall short of our previous expectations....
>
> It may be better than some expected it to be, but we will wait and see, at the same time advising those who have any to hold on to it, as the price is bound to go up. By the telegraphic dispatches we notice that "Old Nick," or something else, is playing havoc back in the East. The laugh won't be on their side this time, at any rate.

Mrs. Fairchild, of Pomona, under date of May 20 ,writes:

> "The honey harvest in this section will not sustain the hopes that were entertained by bee-keepers a month or more ago. Like the prospective wheat crop, honey will be short. We will be satisfied this season with half a crop, and many others will not fare so well as that. In fact, we have as yet no assurance that we will have any to dispose of. Our hopes all hang on the quantity and quality of the white sage blossoms. Last year there was very little nectar in the flowers. With 600 healthy colonies of industrious workers yet to hear from, we must wait for further returns before we can form any definite conclusions regarding the coming crop. The oldest apiarist avoids answering the question: What will the harvest be?

Mr. C. M. Drake, of Santa Paula, writes May 10, as follows:

> The honey prospects look dubious. I don't expect more than half a crop at utmost. Fog is coming up to-day for the first time in several weeks. If it continues it will help us out, but the ground is not wet down far enough. The hills are drying up, but the sages look fair as yet. I think the bloom will not last long when it does open on them. Still, all is guess work till June. Then we can tell pretty well what the crop will be.

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Use of the Honey Extractor.—The *Indiana Farmer* gives the following:

> The full benefit of the honey extractor can only be appreciated in seasons like the indications predict the present one will be. When honey comes on slowly, bees are very loth to build comb, and will fill every empty cell in the hive before commencing the construction of new comb. At times the honey will come in very fast for a day or two, then again slack off, and in times like these, we can only get the benefits by having plenty of empty combs in which they can store the honey without stopping for its construction. We frequently secure twenty-five or thirty pounds from weak colonies or nuclei late in the season, by giving them plenty of empty combs which probably would not have made a pound of comb honey.

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☞A rather curious circumstance happened in the country, not far from Somerville, one day this week. It was sunshiny and warm and a young lady sat in the parlor playing the piano, with all the windows thrown open, when a swarm of bees, attracted by the music, entered a window and settled on the piano.—*Somerville* (*Ala.*) *Falcon*.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

July 25—Western Iowa, at Winterset, Iowa.
Henry Wallace, Sec., Winterset, Iowa.
Aug. 10—Maine State, at Harmony, Maine.
Wm. Hoyt, Sec.
Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.
Oct. 5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.
Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

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The Western Iowa Bee-Keepers' Association met at Winterset, Iowa, May 25, 1882.

Reports were received from the various bee-keepers, from which it was gathered that the loss since last autumn has been about 16 per cent.—nearly all from spring dwindling. The winter was one of the most favorable for bees; the spring the worst known for years, being cold and wet.

The main topic for discussion was "Methods of Increase." The universal opinion was in favor of artificial swarming and judicious dividing.

Samples of domestic preparations made from honey were duly sampled.

Convention adjurned to meet in Winterset, July 25, 1882.

Henry Wallace, *Sec.*

CORRESPONDENCE

For the American Bee Journal.

The Non-Progressive Bee-Keeper.

MRS. A. M. SANDERS.

I s'pose all these progressive folks
  With their patent hives and lotions,
Call me a stiff old fogy,
  'Cause I don't adopt their notions ;
I've kept bees nigh on forty years,
  And yet these Yankee nobbies
Think they can teach me something new,
  With their new-fangled hobbies.

They say they've got some kind of thing—
  I guess they call extractor—
That slings the honey from the combs ;
  And, then, it is a fact, sir,
They'll drain the honey from the cells
  Then let the bees refill it,
And almost every day or two
  They'll go and rob and steal it.

I give my bees the first best chance
  To make their own free living,
Then take whatever they have left,
  And thank them for the giving ;
And then they've got a patent stove
  That, when they choose to make it,
Will pour a mess of stifling smoke
  Into the bees—"plague take it."

I have been told they melt up wax,
  And call it comb foundation ;
And quilts, and clamps, and other sorts
  Of fools' conglomerations.
They've got to swindle honest folks,
  And get their hard-earned money,
With striped bees and hives that hold
  Two hundred pounds of honey.

When you have lived as many years
  As I, I think you'll see
That patent hives are not the things
  That they're cracked-up to be ;
Those monstrous yields of honey
  From one hive they receive—
Well, I want to see it 'fore
  I say that I believe.

I stick to my old hemlock gums,
  Without chaff or any fixtures ;
And I don't have to feed my bees
  With flour and glucose mixtures.
But I suppose the world will move
  On in the same old way,
For swindlers they will advertise
  And make their business pay.

Sheridan, Mich.

Bienenzeitung (German).

My Opinion of Cyprian Bees.

JOHANN STAHALA.

Although requested by several parties to publish my opinion of Cyprian bees in the columns of the *Bienenzeitung*, I did not like to do so, until I had well tried this race of bees in my apiary. But now I feel myself in duty bound to make my opinion public. Count Kolowrat, to whose kindness I am indebted for having my entire apiary alive with genuine Cyprian bees in their most perfect purity and beauty, wrote to me in the spring of 1877 as follows :

"To you, right reverend sir, having grown in our love and esteem as the author of many sterling articles on apiculture, I recommend my golden child, with the ardent desire that you will judge of it without prejudice, and that when the time comes you will inform me of your experience with it, be it good, or the opposite from it."

If any bee-keeper who possesses scarcely one genuine or hybrid colony of Cyprians, may permit himself to judge thereby of the entire Cyprian race, then I think it will be admissable for me to do so, as I have had, during the last two years, a great many Cyprian colonies in my apiary. For in the previous year I had 71 Cyprian-hybrid colonies, with one genuine, and in the present year I had in the summer 87 strong Cyprian colonies in my bee-garden, and after removing the hybrid colonies, I have ready for wintering 73 colonies of pure Cyprians ; and as several bee-keepers in my neighborhood brought last summer a number of small colonies into my bee-yard, to have Cyprian queen cells placed in them, and the young queens fertilized by my Cyprian drones, the number of Cyprian queens that were altogether reared this year in my bee-garden reached up to 108. From this it may be seen that opportunities enough were offered me to test the qualities of the Cyprian-hybrid bees, as well as those of the pure Cyprians. As certain as I was last year, that all of the colonies in my garden, with the exception of one, were Cyprian-hybrids, just as certain am I now, that my Cyprian queens of this year, with very few exceptions, have been fertilized purely Cyprian.

Count Kolowrat, when even the purity of his Cyprian bees was questioned and the assertion was made, that his apiary, too, was filled throughout with hybrids, sent last summer for a fresh colony of Cyprians, and, through the kindness of that gentleman, was it made possible for me to rear my queens of this year from the brood of the recently-arrived original queen, and, as my apiary stands quite isolated, for, in the town I live, and in the surrounding villages no bees are kept, my queens of the present year, with few exceptions, were purely fertilized.

Following this introduction, I will now describe the bees themselves. The Cyprian bees are similar to the Italians, but have many distinctive marks, by which they plainly differ from the Italian bees, and those are :

1. The true characteristic or essential mark of distinction, by which, according to my experience, a pure Cyprian colony can be distinguished from an Italian is this, that all pure Cyprians, without any exceptions, are more or less yellow on the lower part of their hind bodies, changing into black at the point of the body, while the Italians—even the handsomest—are entirely black upon the lower part of their body. Some of the pure Cyprian colonies have such beautiful yellow workers, that only the extreme point of the body appears black, and the yellow part underneath their bodies looks as glossy as if covered with a coat of varnish, and for this reason one can recognize them immediately as Cyprians, when noticing any of them crawling over the glass near the entrance, even when several paces away from them. But if bees are found among a colony that are coal black upon the lower part of the body, then it is a Cyprian-hybrid colony, even when the remainder of the workers have the marks of the Cyprians, and are perhaps more beautiful yet, than the workers of a pure Cyprian colony. For a few of my hybrid queens from last year had such beautiful workers, that a layman would have pronounced them as genuine ; but they could not be genuine, for neither myself nor anybody else in my neighborhood owned any Cyprian drones. Last year, a larger or smaller part of my workers in all the hives were black ; this year I cannot find a single black bee among my Cyprians.

2. Pure Cyprian workers are somewhat smaller, slender, like a wasp, their bodies ending in a sharp point.

3. The hair-growth of the genuine Cyprian bee, especially upon the breast, is a light yellow, and of a lighter shade than that of the Italian.

4. The first 2 rings of the hind body are orange-colored, and these rings are yellow the entire width, while among the Italians, many workers are found that have only two narrow yellow stripes, and sometimes only one.

5. The last white rings of the hind part of the Cyprian workers are broader than those of the Italian, because the small, white hairs forming these rings are longer.

6. The Cyprian bees have between the wings, in the center of the little back-plate, a yellow spot, which I have never found to be of such a light yellow on the Italians ; but the color of this spot is not of the same shade on all the bees, on some it is a little darker.

7. The genuine Cyprian bees seal the combs, especially those of an older date, strikingly ash-grey, while the Italians seal brown.

8. The increase of the Cyprian workers, the pure as well as the hybrids, is multitudinous in the spring. I have never noticed such an increase, neither among the domestic nor among the Italian bees, which latter are by all means superior to the domestic in increasing. All that visited my apiary expressed their surprise over the gigantic colonies which I was able to show to them last spring. I, for this reason, was compelled to divide many colonies, and had to form nuclei, and from those undivided I had to take several sealed brood combs, so as to create space. But I furnished to my bees neither flour, nor milk, nor eggs, as artificial food. Among my Cyprian colonies I noticed not as much inclination to swarm as is the case with Carniolan bees. Only 3 natural swarms did I receive this summer, while other bee-keepers in this locality had a great many natural swarms. It is possible and even probable that, if I had not divided the strongest colonies, and had not taken away from the others so many brood combs, I would have had more natural swarms.

The natural consequence of this extraordinary strong increase of the workers in the spring, is, that the Cyprian bees gather more honey in the summer than any other bee I know of ; for where there are many workers, much can be accomplished.

This superiority of the Cyprian workers, so highly important to the practice, did not escape the keen sense of observation of Count Kolowrat, for this noble-minded gentleman, who is a skilled master in judging of the different bee races, told me that, according to his best knowledge and conscience, the Cyprian bees possessed the greatest ability of performance. When I visited Count Kolowrat last summer, and he questioned me how the pure Cyprian colony which he had sent me was doing, I answered: "That colony is so strong that I had to take from it when I left home 3 combs of brood, fearing that they would swarm during my absence; but I have never found any honey in this hive." Then the Count said to me: "When you have returned home you will find the hive full of honey." And so it was. Returning home after an absence of 5 weeks, I found that the entire hive was filled with combs of honey. It was the same this summer, all hives, the colonies of which I had not divided, abounded with honey, and I therefore had to bring the extractor into motion, although the present year is not looked upon by bee-keepers as a favorable one.

10. Here I will remark, that the collecting propensity which manifests itself with the Italian bees, through a greater liking to rob than is the case with our domestic bee, is developed in a yet greater degree among Cyprians. Therefore, it is well to pay more attention to the Cyprian bees, after the honey gathering is over, than to the Italians, so that their natural collecting propensity may not degenerate into a robbing propensity. Last fall, one afternoon when absent from home, I was robbed of a whole colony.

11. If the genuine Cyprian bees remain strong in the fall, too, then one has greater hopes of bringing them safely through the winter than would be the case with the Italians; for it is well known, that the Italian bees, after the expulsion of the drones, grow weaker from year to year, and never go as strong into wintering as the Cyprian bees. As I had cassated those colonies this fall that had Cyprian-hybrid queens, I did not know finally, into what colonies I should put the bees from the cassated colonies, for as all the colonies were very strong, I did not like to overfill them.

12. The Cyprian drones are, with only few exceptions, of a beautiful yellow color on the top of the hind body, as also on both sides of the same; and I have never noticed this in like manner among the Italian drones, which is, furthermore, confirmed by the masters of bee-keeping, for they say that the pure Italian drones are entirely dark, with only a very indistinct, yellow-looking stripe upon their hind body. I found in my apiary this summer a few drones who were marked yellow nearly all over; they could really be called apistic beauties, while the first drones in the spring were of a dark color.

13. I found it in truth confirmed, what Count Kolowrat had stated to me as his experience, that the Cyprian queens begin much later with laying drone eggs than the Italian or domestic queens. I therefore wrote to the Count on the 24th of last May, that I could see a few drones only in three hives in my apiary, notwithstanding the fact that the colonies were quite strong already, and, as I desired to give to all of my colonies pure Cyprian queens, I felt quite a longing for Cyprian drones. For this reason I employed, when I found that the queens showed little inclination towards laying drone eggs, all the means at my command to increase the number of Cyprian drones, so that I could count with greater certainty upon a pure Cyprian fertilization of the young queens, and my desire was fulfilled. In July thousands and thousands of beautiful drones came flying into my garden. The young queens did not have to look long before finding a Cyprian drone. In this manner I had 55 young Cyprian queens, daughters of the original queen from the Island of Cyprus, fertilized between July 22 and 24, in about 3 days.

Here let me remark, that my experience in reference to the fertilization of the daughters of the original queens, does not agree in full with the experiences of Count Kolowrat, for, while the daughters of the original queen in his apiary furnished, every one of them, a throughout yellow posterity of workers, notwithstanding the fact, as stated by him, that some of those queens had come in certain contact with black drones, I have found that 3 daughters of the original queen from the Island of Cyprus brought forth many black (nearly coal-black) workers, and proved themselves, therefore, Cyprian-hybrids, while all the other daughters of the original Cyprian queen had such beautiful workers for her children, that the heart of a passionate apiculturist must have filled with joy when looking at these golden darlings.

If the Italian bees have bribed the eyes of many a bee-keeper, on account of their handsome dress, so that he could find no rest until he saw himself in possession of the Italians, and saw them fly around in his garden, then the Cyprian bee—the genuine—must indeed charm the eye ot any apiculturist who has never beheld them in their uniform splendor; the more so, because they possess, besides their more beautiful dress, many valuable qualities which the Italians lack. It is not surprising, therefore, that many a bee-keeper after having seen these beautiful and industrious little insects, cannot withstand the desire of coming into possession of them.

14. The Cyprian queens are smaller than the Italians, and have a very long and pointed hind body. In reference to their color, they vary the same as the Italians. Among them I find some that are dark, some are yellow, and some brilliantly yellow. After issuing from their cells, they are mostly similar to the Cyprian workers. The first two segments of the hind body are of an orange-yellow too.

But the upper part of the hind-body, commencing with these orange-colored rings, changes into black towards the pointed end of their bodies; the sides of the hind-body are in most cases light yellow, more beautiful than those of the Italian or those of the Cyprian workers, and the lower part of the hind part is a pale yellow. I had a queen this year upon which nothing black at all could be detected, only upon the point of the body could be noticed an almost imperceptible darker shade of yellow. All to whom I showed this queen assured me of having never before seen such a beautiful queen. Unfortunately, and through my own fault, I have subsequently lost this queen.

The offspring, though, do not always take after the queen; for many a darker queen has yellower workers than another, which is of a beautiful yellow, and has been purely fertilized. The lighter or darker color of the workers takes its origin from the Cyprian drones with which the queen has come in direct connection while being fertilized; for, the first Cyprian drones this spring were darker, and though the Cyprian queens that were fertilized, at that time were fertilized pure, yet the workers (their daughters) were much darker than the workers of those queens that were fertilized later, when I already had many, very beautiful yellow drones in my apiary.

The light color of the Cyprian queens changes likewise into dark or dark-red when they are getting old, as is the case with the Italians. The pure Cyprian queen which I in the previous year received from Count Kolowrat was of a reddish-yellow; this summer she had already changed into dark-red.

15. Finally, I will mention another distinction of the Cyprian bee, namely, the famous sting-fury of the Cyprian bees, about which we have read a description in the *Bienenzeitung*, on account of which it was attempted to deny to them their fitness for a large apiary. I have practiced a great deal with these bees in my large apiary during these two years, and have had, therefore, many opportunities to obtain experience in this regard. Last year, as well as in the present, I have for the second time given new Cyprian queens to all the colonies of my large apiary. I furthermore had to take all the combs from the hives last spring, because I desired to exchange the old-fashioned sticks for frames, brush off the bees from them, insert the combs into the new frames, and get the cabinet-maker to nail down the ledges in the hives, after which I let the bees that had been brushed off from the combs run back into their hives; besides all this, I had to form several nuclei—had to look quite frequently if the queens were fertilized, and in the fall, if the bees possessed sufficient food and proper combs for the winter. As may be judged by the above. I have had in this connection a great deal of experience. But, it will be said, what was your experience in reference to the stinging propensities of these bees? Tell the truth! Have you not been killed by these beasts that take so much delight in stinging? And I answer: No, I am alive yet, and they give me great joy!

Never have I owned such industrious, strong and beautiful bees. It is true, I occasionally was made cognizant of the fact that the Cyprian bees do not belong to a stingless species, and that they possess great expertness in the application of formic acid plasters, but during these two years I have frequently busied myself during a whole afternoon in my apiary, in company with my assistants, without receiving a single sting. I have during that time acquainted myself fully and in detail with the manner of treating the Cyprian bees, having had opportunities sufficiently to learn all about their natural proclivities, temper, etc., and I now know how I have to manipulate the former colonists of the Island of Cyprus.

If you are acquainted with the temper of a human being, with whom you stand in close relationship, then you very soon will know how to act towards him, so as to retain the friendly relation. According to my experience, the Cyprian bees possess a choleric temper. They are, consequently, very irritable and easy become violently angry, and, therefore, they require a treatment which must be compatible with their temper.

But psychology teaches us that man, when in the possession of a choleric temper, will easily fly into a violent passion, when deeply insulted, and if you continue to provoke him while he is in this violent state, he will grow still more violent; on the other hand, though, if you yield to him, or you clear his path, he will be, after a while when his anger has cooled down, one of the best of men. The same it is with the Cyprian bees. For animals, too, have various tempers.

If you carefully avoid everything which would also irritate bees of another race, viz: all sudden opening of doors, all opening of the hives when the wind is blowing, or rain is coming down, all noise near an open hive, every violent shaking of the combs, every hasty manipulation in the hive itself, then they will allow themselves to be handled the same as the Italians. But if you irritate them, or offend them seriously though whatever it may be, they will easily grow very wrathful, particularly when a strong colony has not been opened for a long time and they are not accustomed to the opening any more, they will turn their eyes upon the bee-keeper with a very hard look in them. If you leave such an excited colony to themselves for a while, so as to give time to their anger to cool, you can continue to work near them after a lapse of about two hours with perfect safety. This precautionary measure I have closely followed.

But many bee-keepers increase this proclivity to sting among their bees, because when they see them angry they try to subdue them by force, using smoke or water to accomplish this, instead of yielding to them or giving them time in which to recover from their rage.

I endeavor to avoid everything which might seriously offend the bees. But when it did happen that I had offended through carelessness some strong colony, and I noticed that they intended to make war upon me and had even then already pressed into my hand or face a pointed ultimatum, then I did not attempt again to gain the upper hand by the use of smoke or water; I played the role of the prudent, *i. e.*, I yielded, closed the hive and departed, paying, in the meanwhile, a visit to some other colony; when after an absence of about two hours, I returned in humility to the hive containing the warlike colony, and began to work quietly and cautious, we were again the best of friends. If this had not been my own personal experience, I would be slow to believe that a colony which had been full of rage in the forenoon, could be as meek as a lamb in the afternoon. Here the French proverb is well applied: *Tout par douceur et rien par force.*

Further, I must remark that I have done my apistic work during daytime mostly at such hours when the older bees (being more inclined to sting) were out upon the pasture, so as not to irritate them unnecessarily, for then I had nothing to fear from the young ones; near very strong colonies I worked during the late hours of the afternoon, the old bees were then at home it is true, but they were tired out from their day's labor, and were not so quarrelsome.

But, although the Cyprian bees are somewhat more quarrelsome than the Italians, I nevertheless prefer the Cyprians, when comparing the qualities of both races with each other. And even if the Cyprian bees did not offer anything preferable to the Italians, I like them better than any other bee for the only reason, that they very soon grow strong in the spring and remain strong in the fall, for, as everyone knows, strong colonies are profitable.

Even if the principal motive of most people in keeping bees is to derive profit from it, the beauty of the bees is nevertheless highly valued by such people, and the beautiful and at the same time more profitable bees are better esteemed by them, than those that are black (*Omne tulit punctum qui miscuit utile dulci.* This is my opinion of Cyprian bees.

In expressing my opinion in only a few words, it is as follows:

Count Kolowrat—whom nobody can charge with mercantile speculations—spoke the truth when he told me last year that he considered the Cyprian bee, according to his best knowledge and conscientiousness, as possessing the greatest performing ability. I fully agree with his statement, for, as I have just as large an apiary—although not such a handsome one—as Count Kolowrat, I was enabled to convince myself of the truth of his statement. Therefore, my opinion agrees entirely with the opinion of this esteemed gentleman.

In conclusion I will yet say: Count Kolowrat deserves the thanks of all apiculturists who have Cyprian bees in their apiaries, or who intend to procure them, on account of his introducing the Cyprian bees into our country!

I, for myself, as well as in the name of all such bee-keepers, herewith express to him this gratitude for his great sacrifices, for his disinterestedness and his kind efforts to render service to others.

For the American Bee Journal.

Care of Comb Honey—No. 3.

G. M. DOOLITTLE.

Having the honey all glassed and graded as I told you I did in my last, the next thing we wish is crates or cases for I believe the putting of honey upon any market in bulk is a bad practice, and for shipping honey to a distant market crates are a necessity. A difference of two cents per pound is generally made between honey in bulk and honey nicely crated, while the crates and crating should not cost one-half of that amount. I get out my crate stuff in the winter all ready to nail together, so as to be as near ready as possible for all things connected with the honey harvest. If I purchased my crates of a supply dealer I should do so in the winter, so as to have all in readiness, for it is much better to have a few crates left over than to be obliged to wait, and perhaps lose a good chance of selling our honey because our order is sent at the last moment, when some unexpected delay is almost sure to happen.

For the 2-lb. or prize box there is nothing better than the prize crate, which holds 12 boxes or sections; but for the 1½-lb. box I prefer a crate holding only 9. The demand for small sections seems to be in small quantities, for these small crates are frequently bought by one person, and thus the retailer never opens them, but sells by the crate instead of by the section. Having concluded how many sections I wish in a crate, I pack them together the way I wish them to stand in the crate, and then measure them, which gives me the exact size I want the crate, inside measure, and no guess work about it. Much of the annoyance to supply dealers would be saved if all would adopt this plan. In the making of crates there is one item I wish to speak of. In handling and shipping comb honey, it will always leak more or less from the many accidents it is exposed to, and if the crate allows this leakage to run out at the bottom down on the next crate, the floor, etc., it tends to lower the price of our production. To prevent this, some of our apiarists have the bottom of their crates halved into the ends and nailed both ways, to secure as nearly as possible a tight joint, but for all this the joints get wrenched apart more or less in shipping and leaky crates are the result. To obviate this leakage of crates, I adopted the following plan last fall, which proved entirely satisfactory:

Take good strong manilla paper and cut it two inches larger each way than the bottom of your crate is, inside measure. Now get out an inch board large enough so it will just go inside of your crate easily, and place it upon the paper so that the paper will project equally on all sides, when the sides are to be turned up all around and the corner pressed over nicely, making a joint like that on a baking tin. Lift out your board and set your paper dish in the bottom of your crate, and you have something which will hold all running honey till it is full. We all know that if any honey leaks from the combs that the sections will be more or less daubed upon the bottom of them, and in taking from the crate they are ready to soil everything the touch. To avoid this I saw the ends of the crates 3-16 longer than the piled up sections are high, so as to give room to lay 3-16 inch strips across the bottom of the crate for the sections to rest upon, These strips I get out ¾ of an inch wide, and so arrange them that the edges of the sections come on these strips, thus leaving a 3-16 space under nearly the entire section. Thus it will be seen that all the leakage is kept inside the crate, and that the sections are kept all clean besides.

We are now ready to crate the honey by placing the sections in the crates, putting the best side of each grade on the outside; but do not put any of a lower grade in the same crate. After a crop of any kind is graded, it is always customary to put the best, or face side of said grade out. Having previously weighed the crate, and the weight of it being marked on the same as tare, I now fill it as above and nail on the cover with wire nails, which will drive without jarring enough to crack the combs. I space these nails at equal distances, using three at each end. Over the heads of these nails I drive brass-headed furniture nails, which cover up the heads of the other nails, and give the crate a neat, tasty, finished appearance. Also, when the crates are filled up those on top rest on these brass-headed nails, and thus the tops of our crates are not all marred and bruised up.

Now with a wood-rasp and sandpaper, the corners and all rough places are smoothed off, when the crates and contents are weighed and set down as gross weight above the tare. Draw a line and subtract the tare, setting down the net weight, when the crate is ready for hauling to market. In crating the honey I always place it in the crate the same side up it stood while on the hive, as, from experience I am led to believe it can be transported more safely that way than bottom-side up. In hauling to market, as far as possible I have the combs run crosswise of the wagon, as the motion from side to side of the wagon, is greater than endwise. Get a good platform spring-wagon and load it, so the springs carry the load easy and there is little danger of breaking the combs. In loading honey great care should be taken to set it down without jarring, and always lift the crate to move it, instead of sliding it. I have frequently seen men slide a crate of honey along on the bottom of a wagon or car till the bottom struck the head of a bolt or some uneven surface, when every comb in the crate would be broken by the wrenching the crate received by such careless handling. If our honey is to go by rail it should be placed in the car with the combs running lengthwise of the car, as the coupling of the cars is about all the danger there is of breaking the honey when shipped by rail. By placing the crates a foot or two from the front end of the car, and having the combs run as above, there is but little danger of breakage if the Railway employees will handle it carefully.

This ends the CARE part of these articles.

Borodino, N. Y.

For the American Bee Journal.

The Wintering Problem.

JAMES HEDDON.

Need I offer any apology for presenting this theme again. I believe I need not, when it remains a fact that it is still not understood. In this article I wish to take a retrospective survey of the ground I have come over, in an earnest and honest effort to unravel this problem.

First. It may be in place to hastily survey some of my critics. To me they seem to be divided into about two classes. Among one class are those who feast upon mirth, imagination and ridicule. A sort of "Jack Horner," who stick in their thumb and pull out a plum. Oh! what a brave boy am I." A class who think they see some one going down hill, and so they kick at his sled. Then the other class, whose earnest enthusiasm for the important truths is their only inspiring motive toward controversy.

On page 70 and 72 of this year's *Gleanings*, these two classes are faithfully represented in our "cold hard fact," "box-elder" novelist, and the well known extensive observer and honey producer, George Grimm.

After thanking Mr. Grimm for his splendid compliment, one that from its source settles deeply into my feelings, I feel it a duty, and an act that may be productive of good, to argue with him upon the few points of difference between us. I hope that his fair, earnest and scientific spirit may act as a contagion between us. But first I want to hastily review the ground I have come over in trying to get nearer to the solution of this far-off problem. All who had reasoned publicly upon the subject, had, as is usual, reasoned from the center to the circumference. As all had failed to find what to me seemed reasonable causes for the effects that had come under my observation, I resolved to try the method of reasoning the other way, from the outside toward the center. This plan often very easily solves problems that the other method leaves only in deeper obscurity. Let me illustrate: Years ago I saw a gentleman hand another a three-jointed foot-rule, and ask him if he could open it just three times and no more and open all, and from him every time. I saw him puzzle over it many minutes, when he handed it to me. Though I had never thought of the puzzle before, the thought struck me, that the converse of the proposition must also be true, viz, that the rule would shut three times toward me. I thought I would try that first, and see how matters look through the other end of the telescope. You know the result: Simplicity simplified.

Once more. After astronomers had searched the solar system for more planets, and with their best glasses could find no more, Mr. Leverrier, the celebrated French astronomer, said "there is another planet beyond the orbit of Uranus." Now, instead of saying I will look for it, he said I will look for its effects upon Uranus, and by so doing he theorized a chain of facts in regard to its size, period of revolution, etc. Though having seen nothing, he felt that he knew right where the body of matter would be at a certain day and hour; so he wrote to Dr. Galle, of Berlin, to look for it with his better instrument at that particular time, and in a certain locality, which he did, and which resulted in the immediate discovery of the now well known planet of Neptune.

Whether right or wrong in my deductions leading to my lately written opinions upon the subject of bee cholera, dysentery, or diarrhea, or whatever name you may choose to call these effects, I reasoned in this way:

1st. Evolution is now denied only by the ignorant, egotistic or prejudiced. The third law of evolution is, substantially, "Nature is at war with itself," each organism is warring for the ascendancy over some other; one being can live because another dies. One is the nutrition for the other, from man back to the lowest form of a bacterium. All three of the kingdoms feed upon each other.

Many higher forms of animal life live only upon high forms of animal life, including man, as either the consumed or consumer. Many higher forms live on a mixed diet of both animal and vegetable. It is not only true that higher forms devour lower forms of life, but the converse of the proposition is also true. Very low forms of both animal and vegetable life feed upon the highest type of animal life, man, as well as upon lower forms. In the face of these demonstrated facts, is it unreasonable to look somewhat in this direction for the cause of bee dysentery, when we know that an attack of these germs produce similar symptoms in other animals? But we realize that there is a peculiar condition with bees during winter. We know that to void in the hive is dangerous; we therefore believe that bees can survive in this climate, where they are for a considerable time closely confined to the hive, only because of this peculiarity, which is, that they as a rule eat a food that after the nutritive and heat-making elements are extracted, the residue can be passed off by sensible and insensible transpiration. May it not be that the exceptions to this rule cause dysentery? Throughout all nature, health is the rule, and sickness the variation from that rule, so to speak. The inherent tendency is to live. The outward tendency that you die so others can live. From this line of reasoning my first statement was "dysentery, produced by an over amount of animal or vegetable matter in the food."

At that time I supposed that bacterium was an animal germ, but now I believe it, from good authority to be vegetable, but it is one of those active forms, as mold, etc., that possesses the calamitous capability of reproducing itself in vast hordes, in a space of time proportional to its size. As I use the words "vegetable matter," I mean solid, such as bee-bread, or floating pollen in the honey. Of course, I am aware that honey itself belongs to the vegetable kingdom. From my first thoughts and proposition upon the subject, I have not as yet seen any cause, either from observation or the reasoning of my contemporaries, to change my mind. Through the grounds of the original proposition I have been forced to vascillate from one idea to another according as new evidences and deductions were brought up. Such oscillations should be approved, and not censured, for they are the necessary results of honest investigation, and the leaders to the solution of the problem. But, then, we have among us men that, though not celebrated for their experience or logic, are wordy and vigorous, and this energy must be exercised, and it finds its outlet in making up faces and caricaturing the supposed unpopular.

But Mr. Grimm says that "disease in the human race does not in all cases necessarily originate from the same source." True; but some diseases do (scarlet fever), and these that do are distinguished from those that do not, by their specific symptoms. No disease heired by human flesh has more specific symptoms than bee dysentery. Mr. G. thinks that the following conditions may either by themselves, or variously coupled together, all have more or less effect to produce dysentery, if I understand him correctly: Eating too much pure bee-bread, fermented honey, fermented bee-bread, long confinement, with variable temperature, impure air, and dampness. Others add to the list many other conditions, among which are cold, cider, and Langstroth hives, and some even credit it to human laziness.

Now that most of the conditions mentioned above may act as aggravations upon the cause, I do not deny, and if bacteria is the cause, I am free to admit, that dampness and warmth at some time, and in some place, caused the bacteria to germinate. But I have never been convinced that cider would produce dysentery. Added to my own experience is that of Mr. Grimm, and all point to the fact that cider is not a cause direct, if at all. I have to-day more belief in the pollen theory than the bacteria hypothesis.

I will hastily run over a few facts for the reader to draw his own deductions from. Cider—I have had my bees winter nicely with much cider in the combs.

Pure air and dampness—I saw Mr. Balch's bees come from a close unventilated room, dripping with water, and combs all moldy, in excellent condition. I have seen the same on other occasions. I had bees winter well under ground, in a hole like a grave, when the combs were nearly ruined with moldy rot. I saw about 40 colonies come from a little unventilated clamp, made so small that they filled it almost solid, in the best condition I ever saw bees enjoy in April. I saw about the same number come from the same clamp, one year later, all dead with dysentery—every bee.

Cold and long confinement—I have seen, and have many credible reports of splendid successes in out-door wintering where severe cold and long confinement were present. In the northern part of this State, where their losses are hardly as great as in southern Indiana, such a state of affairs is to be expected.

Varying cold and long confinement—I am not so sure about. I do not now recall a case of the kind here, for in varying winters the variation is usually great enough to prevent long confinement. That is the class of winters that I should most dread, because early breeding would likely result, and then the handling and consumption of pollen in confinement, and consequent dysentery follow.

Fermented honey—How can I look on this as a cause, when I have never known it to exist in any apiary only as an effect. I have found that the honey soon gets thin, after the warmth of living bees is exchanged for the damp carcasses of dead ones. In this climate, out-doors rivals our poorest cellers, for a damp atmosphere; in fact, it far exceeds them. Yet in a cellar of the driest nature, I have had my colonies die like rot, and leave plenty of thick, rich basswood and other honey, with combs dry, but badly daubed. I never saw a moldy comb in that cellar.

I ask you to believe me that I, as well as many others, have seen all the possible causes referred to by Mr. Grimm present in a radical form, and many in various combinations where no dysentery resulted. I have also seen it in its worst form, where not one of these causes existed that I could discern, except healthy appearing bee-bread, and nearly always brood. Now, all that has to be done to shut this theory out in the cold with the rest, is to show us a case of dysentery where the bees have no bee-bread in the combs, nor floating pollen in the other stores, as in case of pure, properly made granulated sugar-syrup. It will not do to point to a case of survival, where the combs contained pollen. We all know that all winds do not blow away houses, but we further know that they bounce up into the air from no other cause. If colonies thus prepared with pure stores free from pollen in all shapes do have the disease under any other circumstances, I shall be forced to admit that the main cause is something else, and, at best, pollen only an adjunct or aggravation, if any damage at all. I would say to the "Jack Horners," do not rake up any old half-forgotten cases, where sugar was fed with honey, or on top of it, or in combs that contained pollen; hold your explosive desire to beat somebody, till some man like Prof. Cook, who has the close practical ability to make a comprehensive test, and the acknowledged integrity to make his decisions satisfactory to us all, will put the matter to a test that shall wind up all further discussion.

Dowagiac, Mich.

For the American Bee Journal.

Reply to Mr. P. L. Viallon.

PROF. A. J. COOK.

Mr. Paul L. Viallon, Dear Sir:—I take pleasure in replying to your courteous letter; the more so as you are one whose tact, energy and superior skill, coupled with sterling honesty, has done very much to brace the "dollar queen business" into its present proportions.

I cannot see how that any observing bee-keeper of experience can hold that the laws which govern in the breeding of the higher animals do not prevail in the breeding of bees. Surely bees vary. Surely they transmit their peculiarities. Then certainly, here as elsewhere, selection guided by close study and observation is all important. Mr. Viallon recognizes these facts practically, and hence his well-earned reputation. I wish prices would sustain him in exercising even far greater care. I do think that we are enabled by care to select our drones to a large degree now. In our apiary only two or three colonies now have drones. I believe that if there was pecuniary inducement, that such wise and painstaking breeders as Mr. Viallon, could even now select his drones. It would require great skill, much pains and no small labor, but it could, I think, be done. I will not tell how, as no one could afford to practice if I did. If I am mistaken, a method would be forthcoming if the prospective gain therefrom would warrant the labor and study requisite. Alas! under the present system it will not.

True, breeders of cattle, etc., do have to weed out. Breeders of bees will have to do the same to reach perfection. You know, Mr. V., that a queen—no queen—will always reproduce all of her good qualities. I would have you know, also, how to breed from the best drones only, and select as carefully in your males as in your queens.

To sum up then: 1st. I have not the least doubt but that the laws that govern in breeding are uniform in all animals. 2d. It is as important to select our drones as to select our queens. I believe it is possible to do this now, with great labor, and if not, that man can invent a way if the inducement is offered. 3d. Selection and weeding out must be carried to the same extent as in other animals.

To conclude, my friend, I have never had a doubt that you lacked one whit in earnestness, honesty or good purposes. I believe that you are doing much to make the system you uphold with your practice less damaging; but I cannot believe that an art like that of queen-rearing, that demands the highest and best ability, can ever reach the high ideal so desirable, unless stimulated by at least a respectable compensation. If it can, it forms an exception among the vocations of the world.

Lansing, Mich., June 7, 1882.

For the American Bee Journal.

A Visit to the Texas Convention.

W. K. MARSHALL.

The Texas Bee-Keepers' Convention met at McKinney, Texas, April 25, 1882. The Convention was well attended, considering that Texas has but recently begun to make any advance in bee-culture. We met in the grove in which Judge Andrews' apiary is situated. The Judge has some 300 colonies of bees, all bright-colored Italians. He uses the American hive, and for a number of years has been breeding the light-colored Italians. He is an amateur bee man, and more than any man I have ever seen keeps bees for the fun of the thing. He has some of the most beautiful queens I have ever seen.

Texas has a diversity of sale and production, and, of course, has some localities better than others for the culture of the bee. Eastern Texas, along streams, affords good bee pasture. In Northern and Western Texas the prairie lands, especially along the streams, bees have done well. In these localities the ratan vine and the horse-mint are the great honey producing plants. In Eastern Texas we have the ratan vine, linden, sumacs, chinkapin, and, in the fall, the goldenrod and cotton.

Though this was but the third meeting of the State Association, we had representatives from quite a number of counties.

The Convention owes its origin and success largely to the efforts and influence of Judge Andrews. The hospitality of the Judge, and that of his estimable family, made the members of the Convention feel quite at home, and they spent a most enjoyable time in his beautiful grove, among his 300 colonies, just in the height of the swarming season. A number of important manipulations were conducted in the presence of the Convention.

The Convention discussed a number of important subjects, such as "Should we breed for color?" "Does the impregnation of the queen affect her drone progeny?" "What is the best hive for this climate?" "How to secure the largest amount of honey, and where, and how to market it?" It was agreed on all hands, that several of the subjects that interest the Northern bee-keepers so much are of no interest to us here, such as how to winter, and the causes and cure of dysentery. There is no trouble in wintering in this climate, and dysentery is almost entirely unknown.

The outlook for our industry is quite inviting. In 1865 I imported my first Italian queen—probably the first ever imported to this State. Now they are scattered all over the State, and intelligent bee-keepers are spread through all sections of the State. Quite a market for honey has sprung up in our large towns.

At our Convention there was a manifest disposition to spare no pains nor expense in securing the best strain of bees. The Cyprians, Syrians and albinos are all being tested this year. The population is crowding into our vast territory, and next year we will, in all probability, be able to report vast progress in our favorite industry. The prospect for a large yield of honey this year is good.

Marshall, Tex.

For the American Bee Journal.

The Dollar Queen Traffic.

O. O. POPPLETON.

I see that the columns of the JOURNAL are again being filled with articles on the "dollar queen" business, but have noticed that not a single one of the scores of such articles have been written by one of that class of bee-keepers who are the most interested in the discussion, viz: the buyer and user of such queens. As one of that number, I will try and add my mite.

The article from Prof. Cook's pen, in a late number of the BEE JOURNAL, I regard as the ablest one yet written on that side of the discussion, and also the most candid, with possibly two or three exceptions, especially the one from Mr. L. C. Root, but both in my opinion have allowed a theory to lead them into an error. All that part of the Professor's article in which he speaks of the great desirability of taking special pains in the breeding of our bees, meets with my hearty commendation; but I utterly dissent from his opinion, that "the dollar queen traffic stands directly in the way of the best achievements."

The truth is, that the theory which Prof. Cook's article so ably advocates is magnificent as a theory, but it is utterly impossible for our thousands of practical bee-keepers to carry it out. He essentially admits this fact when he says, in one place, that he "cannot find time with his numerous duties to do this as he thinks that it ought to be done," and in another, that "he would do this work if he had time to give to it, and had capital to warrant the undertaking." If the Professor, with his abilities and surroundings, cannot even attempt to carry out his own theory, how can he expect our average bee-keepers to do so? Americans are a practical people, and American bee-keepers are not one whit behind their neighbors in that respect, and practical theories are the only ones that will be approved in the long run, and if the Professor with an assured income from another source, can find neither time nor capital to carry out this theory, certainly neither myself nor the hundreds of others who are dependent on their bees for the wherewithal to buy bread and butter for themselves and little ones, can be expected to do so. None except those who have large capital and a peculiar situation can possibly do this work. He says in his article that "to breed the ideal queen will require such a rigorous weeding out that only a small proportion of the queens reared will be suffered to live." May I ask if this very fact does not prevent our bee-keepers from even attempting to breed the ideal queen, however desirous all may be to do so, for such a course would destroy all idea of obtaining any revenue from our bees? If the obtaining a revenue is not our prime object in keeping bees, then I have thoroughly mistaken the aims and objects of our business.

I understand that the vital point which Prof. Cook makes is, the cheapness that untested queens can be procured for destroys any large demand for higher-priced, better queens, and, therefore, no one could sell enough queens at a high enough price to pay for rearing them as he suggests. Boil this entire discussion down, and that is really the only seemingly tenable point raised against the "dollar queen traffic," and if true, we would all of us be forced to admit the strength of it; but, honestly, I do not believe that point is true.

We can all of us remember how much was said in the bee papers a few years ago, about the extra vigor and value of daughters of imported mothers, and how this idea so industriously circulated, caused nearly every one when ordering queens to demand of the seller that they be the daughters of imported queens. I am not fully posted in the business, but am satisfied that within two or three years after the inauguration of the "dollar queen traffic," the demand for imported queens at a high price was at least doubled. Scores, yes hundreds of practical bee-keepers in our Northern latitude will buy early queens at a dollar each, and make them pay too, who neither would nor could buy them at two or three dollars each, and let me assure Prof. Cook that if either himself, L. C. Root or any other bee-keeper of equal reputation for honesty and ability, will raise queens as he thinks they ought to be raised, they would never have to send them to be tested before being purchased, and at good round figures too, and every one who sells dollar queens would be forced to use these particular queens, or retire from the business in disgrace. In other words, the "dollar queen traffic" itself, instead of being the greatest hindrance, would be the greatest incentive to the best achievements, for it would force the purchase of hundreds, where otherwise only scores of the high-priced queens would be bought.

Prof. Cook says he has purchased several untested queens, and won a blank each time. In his "Manual" he says about the same thing, only he there specifies three as the number purchased, and I presume the indefinite number mentioned in his late article are the same ones spoken of in the Manual. I know of an instance where a bee-keeper lost more money, had more variation, and got many more poor queens on hand, by purchasing a very high-priced selected tested queen, than the Professor did by his purchase of three untested ones, and I would like to suggest to him, that the circumstance I mention is just as good proof on which to found an argument against high-priced tested queens, as his trial of only three untested ones is good proof of the right of his argument against that class of queens. There are so many exceptions to general rules affecting bees, that we have long ago learned that a few experiments proves very little, especially on so broad a subject as the qualities of different kinds of queens. No one can give an intelligent opinion of their value, unless on theoretical grounds, without having used a score or so of them, better yet, if their experience covers the use of several scores.

A common argument against dollar queens is to cite the example of Hammond, Bates, Booth, and others in the breeding of live stock. This is right if one only draws the correct conclusions. How much of the stock bred by these men has ever been purchased by the common farmer? How many of those $2,000 animals, recently sold in Chicago, went to others than fine stock breeders? I venture to answer, not one. What would we think of the wisdom of a common dairyman owning a score or so of cows, investing from $2,000 to $5,000 in the purchase of a single animal to improve his herd, when he could purchase an animal practically as good for one-tenth the money. Let our Cooks, Jones, and Roots go to work and produce as superior a strain of bees as Bates and Booth did of cattle, and my word for it, every dollar queen-breeder, and nearly every large bee-keeper, will obtain one or more of the improved queens, without regard to price; but the wildest theorist would not expect ordinary bee-keepers to purchase them by the dozens each year, as some of us do of untested queens. Instead of being a hindrance, I think the selling of dollar queens bred from such stock would do far more toward the universal improvement of bees over our entire country, than anything else that can be done.

The common mistake of those who oppose the "dollar queen traffic" is, they think there is more value in a decided improvement of the bees owned by a few bee-keepers, than they do of a lesser rate of improvement of all the bees in the country. Take a pencil and figure up the relative values of a ten per cent. improvement of all the bees in the country, and a fifty per cent. improvement of the bees owned by a score or a hundred of our leading bee-keepers, and what is the result? Of course, the buying or selling of dollar queens prevents no one from improving his own stock all his circumstances will allow him to do, but sends the direct descendants of our best stock broadcast among the mass of bee-keepers, who are forced to realize every dollar they can from their bees to supply immediate wants.

I have bought and used nearly 150 untested queens during the past few years, and had intended in this to have told how I use them, and some of my experience in buying them; but have already strung this out too long, so will defer that to some future time, if this discussion continues.

I do not want any one to think I intend this as a reply especially to Prof. Cook's article. I speak of that as I have, because it seems to go right to the gist of the matter, in the plainest and most direct manner of anything I have seen. Neither do I wish anyone to think I am opposed to breeding the very best queens we can get. I simply wish to oppose the strong effort being made to pull down a system of selling queens which has been of large benefit to me in my business, and I presume to others also.

Williamstown, Iowa.

For the American Bee Journal.

Texas Letter—Italian Bees Wanted.

MILES HADAWAY.

Mr. Printer:—I hear you print a bee paper, and I want you to send me one to look at, to see if I like it. They tell me you always have much nice readings in it about that queer little crittur that has a sweet tooth in its mouth and a sharp sticker in its tail, as Anne Strother's father told the old bee-hunter down at Powett's Tanyard last summer. I have been keeping bees here three years in the old fashioned way, that was thought very good away down east forty years ago and longer, where I was born and raised. But somehow I can't get along with them here, as old uncle Brewster used to do in Hockanum when I was a boy. Why he used to have lots of hives, and honey by the tubful every fall. when he took up his skeps with the brimstone rags. But here we often get nothing at all now. Whether the miller moths that are so plentiful here eat it all up, or the troublesome busy ants carry it all off, I don't know, and with all my watching could never find out. I sometimes think the bees get bewildered among the many strange flowers we have here, and cannot tell where to look for the sweet; and it were no wonder, such odd-shaped things they are. Maybe if we had other sorts of flowers, apple and cherry blossoms and such like, and hollyhocks and asters, such as they was used to of old, or had other bees better suited to the flowers here, we might do first rate in this climate where the busy fellows could work almost the year round without interruption. Well, cousin Upson was to see us when he come out prospectin', and he told us some wonderful stories about a new kind of hives they have to home, in which the bees build combs as straight as a ruler on sticks, and the nice little whirligig twirlabouts with which the honey can be shaken out of the combs right into dishes, all ready for the breakfast table. I half believed his yarns when he promised to send me one of these shakers next spring; but Mehitable, my wife, says there was a queer sort of a smirk on his face, and he gloared so slily with his eyes while he was a telling and we was a listenin', that she's sure he was only trying to bamboozle us by his talk. I'm not so sure about that. Then he told us, too, about a new sort of imported bees, with striped backs and harmless queen stings that never hurts nobody, and can be handled, like well-riddled rye, without gloves, in the hottest weather. Wife doubted again, but I think there's a good deal of truth in the story; for when I was in Austin to buy a plow for neighbor Crume and a new collar for my horse, I hear some talk about such queer bees in the bar-room of the tavern. The chap that was a telling about them had a patent hive to sell, too. It wasn't one of them with the straight comb sticks that cousin Upson spoke about, but the man called it the Moth Worm Banisher. He said it was so fixed that when a moth touched it at night a scratcher strikes a lucifer match, and straightway the sudden flash and glare of light frightens all the moths within fifty feet, and away they go, harum-scarum, with a grand flutter and flourish, seeking to hide in outer darkness. That I think is a good invention, for these moths are troublesome and hard to catch, and the best way is to banish them right off. But about them new imported bees the man said he could not see any great good that came of them after all the fuss made about them, except that they made their honey from red clover tops instead of white, and hunted up all sorts of out-of-the-way flowers in by-places and roadsides, which the old kind of plain bees never thought worth looking at. Besides, he said, that while farmers could only make hay while the sun shines, these new comers would make honey, shine or no shine. This seemed to be saying something more for them than uncle Upson knew; and as everybody in the room appeared to believe what the hive seller said, because he had no interest in the matter, I think there is a good deal in it, and wish I had some. Mr. Printer, can't you put me in the way of getting a swarm? I would like to have them soon. Cant they be sent by telegraph, so as to come before Christmas? Swarming time begins here soon after New Year, when the drones have got over their holiday frolics. How much will they cost, though? If they are very dear I could not afford the expense till after the next cotton crop is made. They say a queen sells for five and six dollars! Just think of that! A little insect about an inch long selling at the price of a yearling colt! If the workers sell in proportion, won't they come high, as cousin Zeke reckons it out? Or if you put them down at even a picayune apiece, and there are thirty thousand in a hive, only think what a decent hive would come to, by the rule of three! Then there's the freight too, if they come by telegraph, for the ticking clerk in the office always figures that out high; and so I am afraid that, if sent by that line, they might in the end cost more than they would come to. Aunt Dinah says she has read somewhere in the Penny Whistle Weekly, (which she gets every now and then at the grocer's around some articles she buys), that they now send these bees, or some kind of bees, by mail. That, I think, must be a good joke! Why, you might as well send a basketful of hornets by express. Phew, I'd like to stand at a safe distance away and see our sober-faced, steady old postmaster open the bag when they arrived! Wouldn't he make tracks in a hurrry, and feel worser nor if he had a dozen big fleas in his ear? No, no, that's a little too tough a yarn to be swallowed by any but a greenhorn, though it is in print. But have those bees I will, sooner or later; and if they don't come quite as dear as cousin Zeke reckons it out, I'll get you, Mr. Printer, to have 'em sent by rail and steam even if they don't come till after Christmas. I'd have them sent by express, but that moves as slow in these parts as our old ox team used to do in old Middlesex, on Saturday nights, when we had hitched up to go sparking. Don't forget to tell the man who sells and sends them, to be sure to give them food enough for such a long jaunt, as the poor things musn't be let starve on the way. Tell him, too, to pack them well and hurry them forward—"*with speed and care, right side up!*"

Before I close, Mr. Printer, I want to say further, that when cousin Upson was here he told us there was great fuss just now away up in the old States, about some wonderful improvements in bee-keeping, which he said they call "scientific bee-culture." Now what is that? How is it made? How big is it? Is it patented? Does it go by machinery? Is it hard to learn how to work it? Or must you go to a sort of school or college to study how to manage it, till you get the hang of it gradually? Couldn't an old man learn to fix it up, without leaving home? How is one to get science into a bee gum, I'd like to know? That's a little above my huckleberry, as we used to say at Haddam school, when a hard question came up, and puzzled the head scholar of the class, though we had to work it out, for all that. Well, well, there was no lightening telegraph in them days, and nobody then dreamt of gold in California; so there may be something new in managing bees, though the wise man said, long years before I was born, There's nothing new under the sun. You'll print all about it, I suppose, and we'll see what it is when the paper comes. Send it on at once anyhow, or somehow.

Palo Pinto, Texas, Nov. 3, 1870.

N. B.—Wife says, be sure to ask whether it's certain that the new bees can make honey. Our old ones are rather poor hands at it, and some years don't let us have any. Now, even if the striped fellows should produce six times as much, it wouldn't amount to anything, after all; for in Deacon Downer's school we were always told that 6 times 0=0; and we had to believe it, for not even the smartest boy in the class could *prove* that it wasn't so, and the Deacon ever insisted on *proof*.

SELECTIONS FROM OUR LETTER BOX

But Two or Three Warm Days.—Cold here yet. We had a frost here this morning; you could scrape it up in piles on the tin covers of my bee hives, still it was not hard enough to kill anything. We have had but 2 or 3 of what could be called warm days here this season. The mercury has not been above 80° only one day, while last year it was above 90° several days during May. Apple blossoms are now nearly gone here, but on the hills the trees are in full bloom. Last Thursday (8th) the bees got some honey from the bloom, but a rain in the afternoon stopped work, and it has been cold ever since. Glad to see others are prospering.

G. M. DOOLITTLE.

Borodino, N. Y., June 12, 1882.

Madeira Wine.—The recipe for Madeira wine from honey on page 339 is a correct translation of Dzierzon's in Berlepsch's great work. The only omission at the end is: "the bottles containing the wine should be buried in the sand—kept moist by being sprinkled now and then with brine." Berlepsch, quoting Dzierzon, says: "After a few years this wine is worthy to be served on the tables of princes." The only objectionable feature in the recipe is the old chemical superstition that a bright copper or brass kettle is not dangerous to use. It is really astonishing how tenacious a hold the fallacy has upon the people that, as long as they do not let the fluid get cool in a bright copper vessel, there is no danger.

L. K.

Savannah, Ga., June 2, 1882.

Buckeye Honey.—Bees in this locality have had a hard time this spring, and many kept in the old way have died in May. I wintered 19 colonies. All came through in good condition. I commenced feeding in March to stimulate them, in which I succeeded and on the 8th of April the strongest had 6 to 8 frames full of brood; then came a cold wave, and since that time I have been feeding at spells. Once, before I was aware of it, the bees had uncapped nearly all the young brood, and eaten the food from the young bees. Nearly all of the honey this spring has come from the buckeye. I am satisfied, if the spring had been favorable, considering the strength of my bees, I would have obtained 50 pounds of honey per colony from buckeye. It commenced blooming the 2d of May, and is in bloom yet. The honey is white as that from linden, and I like the flavor better. There was some honey from crab apple bloom in it, which I think improved the flavor. WM. MALONE.

Oakley, Iowa, May 26, 1882.

Outlook has Never been Better.—The outlook for honey has never been better than this season, and the honey bee interest is largely on the increase. We bid you God speed in battling for a pure honey against the glucose combinations, and for a higher strain of bees. W. K. MARSHALL.

Marshall, Tex., June 12, 1882.

Good Following Bad.—I had 43 colonies in the fall of 1880, and lost 41 of them. The 2 colonies left were very weak. One of the two colonies swarmed twice, and I made a two-story hive of the weaker colony and extracted 100 lbs. from it; the other gave me 100 lbs. of box honey and some extracted. Last spring I began cleaning out the hives of dead bees, and setting them back on the summer stands for the bees to finish cleaning up the honey. As I could not buy any bees handy, I began to wish for some bees to come along, and, sure enough, the last day of May a fine swarm came along and went into one of my hives. That raised my spirits a little. So I kept on, thinking or wishing, or something else, and on the 4th of June 2 more came; in a few days another came, making 4 in all. The first that came gave me 5 boxes of honey, worth $1.25 per box, and swarmed once, besides we extracted from the old colony in August right smart. The third colony that came swarmed twice; which makes 11 colonies to winter. I packed 8 of them in big boxes that I made for that purpose several years ago. Not one colony lived in them that winter, but I am going to try it again. I put 2 bricks on some of them, and corncobs on 2, besides chaff and straw. In the BEE JOURNAL for December, 1870, is a letter from Texas, that ought to be reprinted for young bee-keepers.

H. M. NOBLE.

Swedesburgh, Iowa.

[The letter is republished in this number.—ED.]

Doing Well on White Clover.—I am glad to be able to say my bees are doing well, although April and May were miserable months. I kept my bees breeding by constant feeding. I wintered 26 colonies without any loss, and have increased this spring so far to 47, all in fair condition for white clover, which is now blooming, and upon which my bees have been very busy the last few days, which is really the first harvest they have had this season, as the fruit bloom was all frosted. WM. B. MCCORMICK.

Uniontown, Pa., June 10, 1882.

Something New.—One day during the first week in May, I opened a hive containing a fertile worker, and in destroying her brood discovered some young worker bees coming out of the cells. I was surprised, but said nothing about it, for fear I might be laughed at. Yesterday I examined the colony again, and found 10 or 12 in a patch of brood from 5 to 6 inches square. Have any of our more experienced apiarists ever witnessed anything of the kind, or read of the like? I would have liked for a scientist to have seen them. This is a very discouraging season so far; starvation prevailed during swarming time; larvæ was destroyed and brood uncapped, so that colonies are not as far advanced now as they were on the last day of April; and all this is not the result of a scarcity of bloom, but the cold confined the bees to the hives, and the nectar went to waste, if any was secreted. I am not able to enumerate the number of colonies lost, but there have been many.

ROBERT CORBETT.
Manhattan, Kans., June 9, 1882.

Scientific Pleasantry.—

Two prodigies this age has shown—
In Art sleek Oscar's flower has blown,
In Science Wiley reigns alone.

Let "Riley" quickly stand aside,
It was a Hoosier—well, he never lied—
A "scientific joke" is what he tried.

Evansville, Wis. H.

Splendid Prospects.—Bees have been doing splendidly the past few days, and the prospects are now very good.

WILLIAMSON & BRO.
Lexington, Ky., June 14, 1882.

Honey Locust.—Bees are just booming on the honey locust; indeed, I am beginning to think it equal to basswood, where it is abundant. There are, perhaps, 200 large honey locust trees in my vicinity. Most of them are loaded with racemes of blossoms. The bees have partly deserted fields of white clover, and their music can be heard all day long in the tree tops. This morning I had a swarm by 6 o'clock. Work in sections is going on finely.

C. H. DIBBERN.
Milan, Ill., June 14, 1882.

No Nectar.—For the last 3 or 4 years there has not in this part of Missouri, been enough nectar at any time to support bees—saying nothing of surplus—that is when bees could get it. This spring we had a fine apple and peach bloom; also crab apple, with many other blossoms in the timber; but not a day that the bees could get out after it. I have fed and tried to save them, but to no purpose; they are all about gone. We have not had any honey to eat for years, so I have concluded to raise sorghum for table use, since all other sweets are adulterated. I live in a newly settled country, where the people make "war" on white clover; no clover is sown—nothing for bees until Spanish-needles, and they have been worthless for the last three years; we may as well sow onions as buck wheat for bees. Scarcely a bee is living in this part of the country, and I guess the harvest will get better before we hear the "hum of bees" again.

P. P. COLLIER.
Rush Hill, Mo., June 10, 1882.

Rain Needed.—Bees here never wintered better than last winter, and the opening of spring found them in splendid condition. April was cold and wet, and May cold and dry, with heavy frosts almost every night, which killed nearly all the fruit blossoms, leaving nothing but dandelions that bees could obtain anything from. Unless rain comes soon there will be but little white clover; it has just begun to blossom, but is drying up fast. There has been no swarming yet, and drones are flying from only a few of the strongest colonies. Taken all together, the season since the first of April is the worst that we have had for twelve years, and unless a change soon occurs for the better, the present will prove a most disastrous season for bees.

O. E. COOLEY.
Bluffton, Iowa, June 11, 1882.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., June 19, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—For Extracted we pay 7@9c. on arrival. Prices for comb honey nominal and demand slow.

BEESWAX—Brings 18@22c. The demand exceeds the offerings. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey is light, prices being made to meet views of purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

NEW YORK.

HONEY—White clover, fancy, 1 lb. bxs., 15@16c.; white clover, good to choice, 1 and 2 lb. bxs., 13@14c; buckwheat, 2 lb. bxs., per lb., 11@12c. Extracted and strained, white, 9@10c; dark 7@8c.

BEESWAX—The market continues rather quiet, but the supply is light and prices firmly sustained. Western, pure, 24@24½c.; Southern pure, 25@25½c. D. W. QUINBY, 105 Park Place.

ST. LOUIS.

HONEY—In fair demand. Extracted selling at 8@10c.; comb scarce—nominal at 18@22c.

BEESWAX—Prime in demand at 22@23c.

R. C. GREER & CO., 117 N. Main Street.

SAN FRANCISCO.

HONEY—The first consignments of new arrived this week, including comb and extracted. Some new extracted in half barrels was placed at 8c., and some new comb, of very good quality but not extra white, sold at 16c.

We quote white comb, 14@16c.; dark to good, 8@12c. Extracted, choice to extra white, 8@8¼c.; dark and candied, 6½@7c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

CLEVELAND.

HONEY—As there is no honey in market, we have no quotations this week.

A. C. KENDEL, 115 Ontario Street.

OLDEST BEE PAPER IN AMERICA — THE AMERICAN BEE JOURNAL — ESTABLISHED IN 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance.

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For **4** weeks		**10**	per cent.	discount.
" **8**	"		**20**	"	"
" **13**	"	(3 months)	**30**	"	"
" **26**	"	(6 months)	**40**	"	"
" **39**	"	(9 months)	**50**	"	"
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Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

◆

☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

☞ Neltnor's Fruit and Flower Grower is on our desk; it is edited and published by John C. Neltnor, Turner Junction, Ill., at 75 cents a year.

◆

The Villa Bohemia, by Marie Le Baron, published by Kochendoerfer & Urie, 200 Broadway, N. Y. This is a very interesting little story of 250 pages. Price 50 cents.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ When changing a postoffice address. mention the *old* as well as the new address.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞ Ashland, Pa., June 3, 1880.—A case of spavin that came under my observation was entirely cured by one bottle of Kendall's Spavin Cure, and the horse sold afterwards for $200.
25tf Yours truly, C. H. BARNARD.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

ELECTROTYPES

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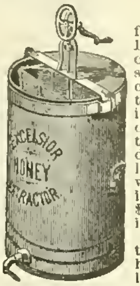

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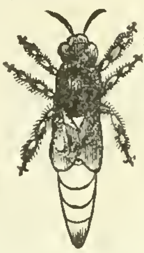

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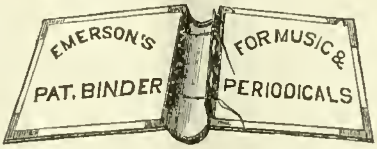

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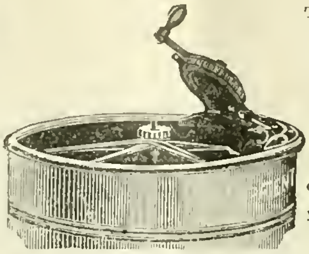

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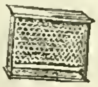

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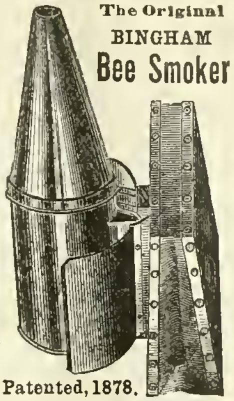

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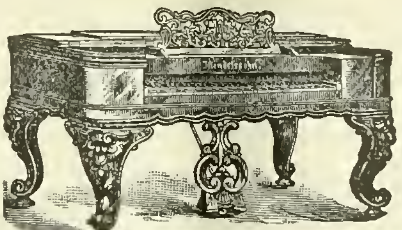

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Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. Price, **10c.**

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. This contains many useful hints.—Price **15c.**

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.................................. 401
National Convention.............................. 401
A New Book for Farmers........................... 401
Prospects More than Bright....................... 401
Drones—Are they Auxiliaries...................... 402
Food Poisoning................................... 403

Among Our Exchanges—

Watch Them 404
Unused Honey Resources........................... 404
A Mule's Amusement............................... 404
Bees and Honey at Fairs.......................... 404

Correspondence—

Light versus Dark Italians....................... 405
Evaporator for Extracted Honey................... 405
Specimens of Apis Dorsata........................ 405
Parthenogenesis in Bees.......................... 406
What is a Fertile Worker?........................ 407
Progress of Bee-Keeping in England............... 407
How to Hunt Bees in the Woods.................... 408

Convention Notes—

Comb or Extracted Honey? 408
Northwestern Wisconsin 409
Madison, Wis., Convention........................ 409

Selections from Our Letter Box—

Motherwort....................................... 410
Sudden Transition................................ 410
Questionable Borrowing 410
Rearing Queens in Utah 410
Prospect Good for Basswood....................... 410
Coffee A Sugar for Winter........................ 410
Spring Dwindling 411
Queen Shipping Cages............................. 411
Enigmatical 411
Things Look Brighter Now 411
Difference in Location 411
Large Yield Expected............................. 411
Osage Orange for Honey........................... 411
A Screen to Protect from Robbers 412
Working on White Clover 412
Early Swarming................................... 412
Satisfied with Prospects......................... 412

The National Convention.

Prof. Cook, President of the North American Bee-Keepers' Society, writes under date of June 19: "As I know the readers of the American Bee Journal will be glad to learn, I hasten to announce that the North American Bee-Keepers' Society will, without doubt, meet in Washington Park Hall, just across Washington Park from the Exposition Building, Cincinnati, O., during the last week of the Exposition, Oct. 3d to 5th. Let all bee-keepers see that excursions are arranged for that week. We have already one promised from Detroit. Round trip only $15.00. The announcement will be made officially by the Secretary in a few days.

* * *

Prospects More than Bright.—As we advised our readers weeks ago, the "silver lining of the clouds" is now almost an assured fact. From every quarter come the most encouraging hopes. and every southern breeze is burdened with the sweet perfume from white clover, which was never more plentiful than now. Linden, heartsease, horsemint, and other flowers give promise of great abundance, and with ordinary favorable weather for the remainder of the season, in most locations where were heard the frequent groans of despair will be sung the glad pæans of joys realized. The prospects for an abundant honey harvest were never better than now.

* * *

☞ Articles for publication must be written on a separate piece of paper from items of business.

New Book for Farmers.—We have on our desk a new work that will be of untold value to the farmers. It is called "The Farmers' Practical Encyclopedia," and contains "a systematic and practical treatise on every subject pertaining to farm and home life in America." It contains over 1,200 quarto pages, is elegantly bound in 2 volumes, and is published by Chapman Brothers, Chicago. The article on bee-keeping is very thorough, and embraces every part of progressive bee-culture. It extends over 14 pages, and is beautifully illustrated. In recommending the encyclopedia to the farmers of America, we feel that we are doing them a kindness, for it gives to the farmer, in his own sphere, in behalf of his own interests and profession, a literary work of extraordinary high character, exhaustive, complete and practical. It embraces the entire scope of rural life in every department. It contains the gist of many thousands of volumes, prepared by the most scientific, experienced and practical men on this and the European continents, and therefore contains a larger amount of well-timed and valuable information than can be found in any work of its scope yet published.

* * *

Fairs.—Any of our friends who may intend to visit fairs, will be furnished with copies of the Bee Journal for distribution to bee men they may meet there, by sending us a request stating how many they can take care of. We will also send two large, colored Posters to enable them to get up a club, if they wish to do so.

* * *

☞ We have received the Premium List of the "Northwestern Industrial Association" to be held at Minneapolis, Minn., on Sept. 4th to 9th, 1882. It contains no premiums for exhibits of honey, bees, or beeswax.

Drones—Are they Auxiliaries?

Mr. Wm. Maxwell, Edgerton, Kans., furnishes the following information regarding his experience with the barberry bush, which will be read with interest by all horticulturists:

> In the AMERICAN BEE JOURNAL of June 7, page 361, I see an inquiry by P. J. Swain, concerning the barberry plant, and Prof. Burrill's remarks thereon. Now, I want to relate a bit of experience that I have had with this shrub. I have had it a great many years on my grounds, and much admire its beauty, and find it to be considerable help to the bees during the short time it remains in bloom; it also makes a good inside hedge, but is not strong enough to be depended upon for an outside inclosure. Some 6 years ago I planted one side of my peach orchard with it, intending to hedge it all around; three years since it began to bloom finely (it seldom bears any fruit in this locality), and was truly "a thing of beauty." About the 15th of May I discovered that my peach trees were peculiarly affected, the leaves were covered with a sort of mildew, turned white, and crimped and twisted; the fruit turned white and dropped badly, and the whole tree had a leprous appearance; the fruit was not all destroyed, but was badly damaged; the next year the same thing occurred. Well, in conversation with an eastern man he remarked that the barberry caused wheat to rust, and the farmers did not tolerate it; I at once concluded I had the key to my peach disaster, and accordingly ordered every barberry on my premises cut down, and now my peach trees and fruit look as fine as I could wish, and are perfectly free from leprosy. I am satisfied that the profuse light pollen caused the trouble. I have not discovered that my wheat was affected by it, but I have never had any wheat within less than 80 rods of the barberry. Let me hear from others. Now, as I am a novice in the bee business, I want to make an inquiry or two. I have a few colonies of bees—some Italians and some hybrids—all the queens pure, but some impurely fertilized. The drones of the impurely fertilized are darker than the pure ones, with shining black heads, while the pure ones are lighter colored, with claret-colored heads. This peculiarity of the color of the head I never discovered in any other instance, and would like to know whether it is a characteristic of pure drones? My observations with my drones seem to disprove the commonly received theory of pure queens producing pure drones, although impurely fertilized.

Scientists and theory hold that the drones of pure queens will be themselves pure, regardless of how the queens were mated; but many bee-keepers of long and close observation have of late years cited many exceptions to the rule. We have often thought there is much yet to learn regarding drone production and their functions in the hive. It sometimes seems almost improbable that nature would be so lavish with drone progeny, if one only was conducive to the prosperity or perpetuation of the colony, while the queen progeny, upon which existence itself depends, should be so exceedingly limited, and the instinct of the first emerging should impel her to immediately destroy all possibility of succession.

Who that is familiar with the inner economy of the bee hive, has not observed the hundreds of drones in a strong colony, during a rapid honey flow, apparently as busy on the combs in which honey is being stored as are the worker bees, and it is quite a common occurrence to observe them thickly congregated on the cells in which are freshly deposited eggs and newly hatched larvæ, as though by their presence they assisted in incubating the eggs, or furnished the natural heat necessary for the larvæ. More particularly have we observed this when, after a season of rapid breeding, a cold windy spell of several days' duration visits us, and our bees, as if with one general impulse, flock to the grocery stores in hordes, often in two or three days depleting a ten-frame colony to one or two spaces. We have within the past month had colonies containing seven frames of eggs and brood in all stages, depleted to two frames of workers, and "powerful weak" at that. If drones do no "family duty" in the hive, how is it possible to rear a hive full of drones, when the queen is but a drone-layer?

It is a curious fact, when honey is coming in most rapidly, when the glad, joyous midnight roar can be heard rods distant from the hive, when the bees during daylight with frenzy rush over each other pell-mell in their eagerness to go for fresh loads of nectar, and returning wearily drop on the alighting-board close to the entrance and crawl in, then can be found the drones thickest in the hive or among the boxes where the newest, thinnest honey is being deposited; but let the honey-flow altogether cease, and the work of the drones be no longer required, and they will be herded on the outer or sealed combs, and if the dearth continue, they will be driven from the hives entirely. Who can assert that they do not perform an important function in assisting to ripen the honey, or extracting the water from it, quite as necessary as the gathering of it? That hordes of drones are necessary we do not think; but we are not certain that they may not be too rigorously excluded from the hives. That they are extraordinary gormandizers we do not think, for we have never been able to discover on the outer combs, where the honey has been once capped or sealed over, and where the drones have been all herded perhaps for days, a single cell which has been uncapped by them, and robbed of its store of sweet. There is much concerning the drones which is not yet understood, at least by us, but we have no doubt a great deal will in time be learned, and perhaps many theories held at the present time be modified.

"Red-headed" drones, though in the minority, are by no means exceptional, and are frequently found in large apiaries of Italians, all apparently equally pure.

Since the above was in type, the *British Bee Journal* for June has been received, in which we find the following remarks on the subject of drones by its editor:

> In the forthcoming translation of Dzierzon's *Rational Bee-Keeping* will be found a remark by the author to the effect that drones serve no purpose beyond the fertilization of queens, and to this we have taken exception, as follows: "We cannot accede to the author's assertion that the fertilization of queens is the 'the sole purpose' of drones' existence. It is well known that when a swarm has left a hive there is often but a handful of worker bees left at home to care for the huge mass of brood in all stages that the hive contains, and should a cold night follow a swarming day, as is often the case, this handful of workers would find it impossible to maintain the necessary heat in the hive, and there would be great loss of brood and bee life. In this condition of things, the drones, the great majority of which are stay-at-homes (few accompanying a swarm) are of immense service, maintaining heat which otherwise the few workers would be compelled to generate for themselves, and setting the latter free to nurse the newly-hatching larvæ. It is true that when the young queen has hatched, and been fertilized, and the weather becomes cold, the drones are slain; but at that time there will be little, if any, unsealed brood in the hive, while thousands of young bees will have hatched into life, rendering the hive populous, and the drones unnecessary. Nor must it be forgotten that drones are not usually slain until "cool weather sets in," or, in other words, until the honey harvest has ceased, a fact upon which is hinged a belief, in our mind, that they are of service in helping to evaporate the honey prior to its being sealed for winter store. Many have noticed the large number of drones

often to be found in supers, and though it is generally supposed they are there as consumers only, it by no means follows that such is the case. The old saying, 'Give a dog a bad name,' etc., is fully carried out with drones, and no one seems to seek for or believe there are any good qualities in them, yet, as many will doubtless be able to substantiate, some of the best results have been achieved in hives whose drones were at least numerous. In that case the thought has been, if the bees did so well with that immense number of drones to keep, what would they not have done without them? ignoring the possibility that the drones may have assisted in procuring the good results. And is it not true that under the present system with drone-traps on during the honey harvest many have cause to complain that their supers, though filled, are left unsealed by the bees? We have hundreds of times seen bees returned from the fields give their honey to drones, and have as often seen drones with their heads in honey cells. Is it certain that the drones in this case are not in a sense honey-carriers? We know they have no honey sacs, as have the workers, but that will not make our suggestion ridiculous. The bees prepare the food for the nurseling bees in their stomachs. May not drones prepare honey for storage in a similar way? They have no honey sac to collect it in, their duty lying at home except on special occasions at certain hours of the day. Bee-anatomists who search only for what they hope to find may perhaps overlook truths that have not been suggested. But let the influence be what it may, we cannot believe the drone to be as useless as he is accredited."

Food Poisoning.

In the BEE JOURNAL of May 31st, we gave an instance where cheese, manufactured from milk produced by cows that had been fed glucose meal, had "rotted down in thirty days," and gave a recital of some of the dreadful consequences which would result from the consumption of such poisonous food. As proof that our opinion was well founded, we reprint the following telegram to the *Inter-Ocean*, dated Adrian, Mich., June 19, 1882:

> Since Friday evening last some seventy-five people of this city have been poisoned by cheese. Whole families have been suddenly seized with violent vomiting and purging, and in many cases severe illness has resulted. In one case, that of John L. Smith, only the most vigorous treatment prevented a fatal result, while to-day several men who had partaken of the cheese were so ill that they could not attend their labors in the Lake Shore and Peninsular car-shops. The cheese was sold by several grocers, but was the product of one factory on the 20th of May last. A microscopic examination shows the cheese to be filled with minute parasites, but the deleterious effects are believed to have arisen from the presence of an accidental or otherwise dangerous substance. The affair certainly demands an official investigation, and the cheese should be submitted to a scientific analysis.

It is not difficult to anticipate what an invstigation will demonstrate, nor to place the blame for this extensive poisoning just where it belongs. Glucose is undoubtedly at the bottom of it all. Unless some stringent repressive measures are adopted by Congress, poisoning will become as common as are now the lesser ills, our nation will become one of chronic dyspeptics, and our successors will be effeminate and perhaps imbecile. In fact, it is difficult to enumerate the evils which will result from the constant consumption of poisons that will cause cheese to "rot down in thirty days," and imperil at one time the lives of "some seventy-five citizens" in one small community. Life and health are no longer safe; the most substantial articles of food are adulterated with deadly poisons, and milk, the first food of nature, is drawn from the udder a poisoned stream.

We have long held that Congress possessed the Constitutional right to regulate the traffic in and manufacture of food adulterations, as also, to restrict or prohibit the sale of adulterated food. By a recent ruling of the Court of Appeals, even State laws can prohibit the manufacture of deleterious food of any description. The following extract from a late number of the St. Joseph *Herald*, cites a case in point:

> Missouri has a new law forbidding the manufacture or sale in this State of any imitation of butter, no matter whether represented to be genuine or not. The oleomargarine interest made a desperate fight in a test case, carrying it to the Court of Appeals on the question of the law's validity. The decision is that the prohibitory act is Constitutional. "A statute prohibiting the manufacture and sale of any article of food made in imitation of a wholesome article in common use," says the court, "which imitated article is so repugnant to the tastes and prejudices of our people that they will not eat it when advised of its real character, but only when cheated into the belief that it is the genuine article, in resemblance of which it is made, is a statute fairly within the police power of the State, not opposed to any provisions of the Constitution of the United States, and the wisdom of which is not to be called into question in the judicial courts; and this is so, although particular samples of such imitating articles may, in the opinion of scientific men, be as wholesome and beneficial an article of food as the original substance in imitation of which it is made." The effect of this decision will be the suppression of several factories in St. Louis, where the sale of imitation butter, made from lard, beef fat, and other materials, has been extensive.

The decision of the Court of Appeals covers more ground than even we had assumed. We had no doubt it was Constitutional to prohibit the manufacture and sale of deleterious articles, under any but their right names, not only as a matter of commercial policy, but as a sanitary measure; the Court decided "A statute prohibiting the manufacture and sale of any article of food made *in imitation* of a wholesome article in common use....is a statute fairly within the police power of the State, *not opposed to any provisions of the Constitution of the United States*, and the wisdom of which is not to be called into question in the judicial courts.... although *particular samples* of such imitating articles may, in the opinion of scientific men, be as wholesome and beneficial an article of food as the original substance in imitation of which it is made."

When an article has a tendency for evil far in excess of any good which it can accomplish, and the principal use of which must be in a fraudulent manner, if it is not a matter proper to be legislated upon and prohibited, except under special restrictions, then, surely, there is no cause for legislation, and Congress had better renounce all power to protect the people. Glucose is as much a public abuse as oleomargarine or suine, and far more dangerous in its consumption, because of the multiform shapes in which it is imposed upon the public. Congress *must* legislate upon the subject of food adulteration.

☞ We have received the premium list of the Thirtieth Annual State Fair to be held at Indianapolis, Ind., Sept. 25 to 30, 1882. In it we notice $25 as premiums for honey, $2 for wax, and two diplomas for bee-keepers' supplies. These amounts ought to have been ten times as large, and more varied.

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Watch Them.—The *Indiana Farmer* gives this advice to beginners:

Watch all colonies closely that you have hived on empty frames, and see that they build the combs straight. Watch all colonies that have cast a swarm, and see that a young queen does not hatch out and lead off a second swarm.

Watch all colonies and nuclei containing young queens, that they do not become queenless by the young queen being lost while on her bridal trip. Watch all queenless colonies that they do not become infested with fertile workers. Keep a frame of uncapped brood in the hives that have been queenless any length of time. Watch the sections of comb honey and take them off just as soon as sealed over, to protect their pearly whiteness. Watch all combs packed away, that the worms do not destroy them. If you find any signs of their work fumigate with brimstone. Watch that the entrance to the hives does not become clogged with grass and weeds.

Watch the source of the honey supply in your immediate locality and see where it can be improved by planting.

Watch your neighboring bee-keeper and see if he has better success than you. If so, why?

Watch and remember what you see.

Watch and you will be sure to improve by the care taken.

◆

Unused Honey Resources.—A late number of the Chesterfield, Eng., *Courier*, has the following very sensible communication from one of its contributors:

A few months since in an article on "Agricultural depression" you called the attention of your readers to some of the minor products of the farm, and pointed out that one of the best remedies for the present distress was to give attention to sources of profit which have hitherto been much neglected, and not to allow the foreigners to take out of our country for eggs, poultry, fruit, etc., large sums of money that would be better in the pockets of our own people.

Now without staying to express my own opinion on these matters—which might not, perhaps, quite accord with yours—will you kindly allow me to direct attention to one of these minor industries of the farm and cottage garden which certainly at present is not very productive, but which under better management might prove a source of considerable profit to the small farmer and cottager, as well as a most interesting occupation and amusement to those who have more leisure, I mean the keeping of bees.

It will be seen from an advertisement in your columns that the British Bee-Keepers' Association is kindly sending an expert to give a lecture in Chesterfield on bees and bee-keeping, and it is arranged that this lecture shall be given in the Stephenson Memorial Hall, on Saturday next, at 3 p. m., under the presidency of W. Gladwyn Turbutt, Esq.

Those of your readers who will take the trouble to attend—and as the lecture is entirely free, it is only the the trouble—will, I think, be surprised to find what an extremely interesting pursuit bee-keeping is and how very remunerative it may be made under a proper system of management, at least in ordinary seasons and situations.

The old wasteful and cruel system of murdering the poor bees to obtain their honey—almost equivalent to slaying a cow when a jug of milk is wanted—was, it is true, seldom profitable, as indeed it did not deserve to be, but the modern method, which Mr. Blow will explain and illustrate on Saturday, will show all who care to learn how these industrious little creatures may be made to afford great pleasure and profit to all who treat them properly.

To show the importance of the matter I may say—and all who really understand the matter will bear me out in asserting that during last summer tons, literally, of honey was wasted in the immediate neighborhood of Chesterfield for want of laborers to gather it in—those who should have been working in this harvest for us having been burnt in the sulphur pit in the previous autumn, or worse still, left to perish of hunger and cold for want of due care and attention.

We hope, however, that the spread of information on the subject and the consequent establishment of better systems may soon place us in a better position, so that when another such season occurs, we may be able to gather in a large share of the rich gifts a bountiful Providence supplies, and that this country may not be dependent on other lands for the supply of what we carelessly and ignorantly allow to run to waste at home.

◆

A Mule's Amusement with Bees.—A California exchange gives the following:

I was visiting a gentleman who lived in the vicinity of Los Angeles. The morning was beautiful. The splash of little cascades about the grounds, the buzz of bees, and the gentle moving of the foliage of the pepper trees in the scarcely perceptible ocean breeze, made up a picture which I thought was complete. A mule wandered on the scene. The scene, I thought, could have got along without him. He took a different view.

The mule had wandered up close to a large bee hive, and got stung. His eyes lighted up, as if that was just what he was looking for. He turned on the bee hive and took aim, and fired. The bees swarmed.

They lit on that mule earnestly. After he had kicked the last bit of bee hive so high that he could not reach it any more, he stopped for an instant. He seemed trying to ascertain whether the 10,000 bees which were stinging him meant it. They did.

The mule turned loose. I never saw anything to equal it. He was enveloped in a dense fog of earnestness and bees, and filled with enthusiasm and stings.

I had no idea how many bees a hive would hold until I saw that bee hive emptied on that mule. They covered him so completely that I could not see any of him but the glare of the eyes. I could see from the expression of his eyes that he didn't like the way things were going.

Not only was every bee of the disturbed hive on duty, but I think the news had been conveyed to the neighboring hives that war had been declared. I could see bees flitting to and fro. The mule was covered so deep with bees that he looked like an exaggerated mule. The hum of the bees and their moving on each other combined in a seething hiss. Numbers were telling on him. He looked distressed. He had always been used to kicking against something, but found now that he was striking against the air. It was very exhausting.

He finally got so he did not rise clear of the ground, but continued to kick.

The intervals grew longer and longer, until he finally was still. The bees stung on. He looked as if he thought that a mean, sneaking advantage had been taken of him.

I retired from the scene. Early next morning I returned. The sun came slowly up from behind the Eastern hills. The light foliage of the pepper trees trembled with his caress. His golden kiss fell upon the opening roses. Bees could be seen flying hither and thither. The mule lay near the scene of yesterday's struggle. Peace had come to him. He was dead. Too much kicking against nothing.

◆

Bees and Honey at Fairs.—The *American Agriculturist* for July contains the following:

At the last National Convention, which was one of the most pleasant and profitable bee-meetings ever held in America, it was resolved to make an effort to have many fine exhibitions at the State and district fairs of 1882. In England and other parts of Europe, these exhibitions are conducted on a grand scale, and excite much interest. They are thought to be great educators, and to stimulate the honey market to a large degree. It is important to secure the offering of generous premiums. The State and Central Societies of Michigan have already secured favorable action by two of the largest Agricultural Societies of that State. Let all other societies do the same. It is probable that in no other way can the interests of bee-keepers be so rapidly advanced.

CORRESPONDENCE

For the American Bee Journal.

Light versus Dark Italians.

W. Z. HUTCHINSON.

Mr. Aaron Benedict says that it "is much easier for the careless breeder to rear dark than light-colored Italians, hence they are ready to praise the kind of bees they have, and if queen-breeders, they can send out all the hybrid queens they can rear, if dark."

The testimony of all queen-breeders, and my own experience agrees with their testimony, is that to breed for and obtain light color in bees is one of the easiest traits to be obtained by breeding. In reply to the remark about the breeders of dark bees being able to send out hybrid queens, I would say that queen-breeders do not rear their queens from hybrid queens. It is just as easy, and requires no more work, to rear queens from a pure queen, than to breed from a hybrid queen. What breeder would be so foolish as to send out hybrid queens for pure queens?

Mr. B. says: "I believe if these advocates of dark Italians had queens that were light-yellow, and produced all light-yellow bees, they would sing a different tune." In reply I would say: show me the advocate of dark Italians who has not also tried the light Italians before "singing his tune."

Mr. B. says: "It is the instinct of all honey bees to gather honey." Just so, but does not Mr. B. know that some bees possess this instinct in a greater degree than others, or else with the instinct is joined a greater ability?

Again, Mr. B. says we should have "in view, first, the lightest-colored bees; second, large; third, docility." To make the joke complete, he ought to have added, fourth, honey producing qualities. In my opinion, honey production, hardiness, prolificness, amiability and color should be bred for in the order named, but I fear that some have bred in the reverse order.

The editor of the *Instructor*, in an editorial in the May number, expresses my views so exactly, that I hope I may be excused for quoting his concluding paragraph, he says: "We do not claim that the dark Italians are best simply because they are dark. Although there is undoubtedly a natural difference in many respects in the two strains, we think the difference is caused principally from the majority of bee-keepers having bred almost exclusively for color, without paying enough attention to other points equally or more important, such as vigor, prolificness, honey gathering qualities, etc. If color is not gained at the expense of these qualities, well and good. But we fear that in too many instances it is. When breeders begin to realize that color of itself amounts to nothing; that queens may be as yellow as a gold piece and still be worth nothing as producers of business bees, then, and not till then, we may expect to see a general improvement in the race."

Rogersville, Mich.

* * *

California Apiculturist.

Evaporator for Extracted Honey.

W. W. BLISS.

In the first engraving A shows an opening two inches wide, covered with wire cloth extending the whole length of the tank, and the whole is covered with a narrow roof, to keep out the rain; B is an iron rod to hold the upper part of the tank together and keep the roof from spreading; C C are posts, 3x4 in.; F is a piece of 3x4, extending across from post to post under the bottom, and is let into the posts 1½ inches, to support the weight; D is a honey gate; E E are pieces of iron bent around the posts, and bolted to F to keep it from spreading apart at the bottom. Or instead of these bent irons, an iron rod as at B, may be run through the legs below the tank, or both rods and bent clasps may be used and thereby secure additional strength.

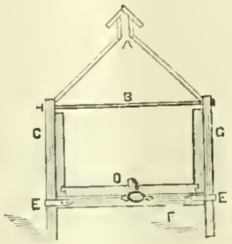

FIG. 1—*End View.*

In the second illustration A A A A are window glass. B B B are the posts; C C C are the ends of the bolts; D is the honey gate. The tank is made of two-inch plank, and is 7 ft. long, 3 ft. wide, and 20 inches high, all inside measure. The ends should set back from the ends of the sides about two inches, and let into the sides and bottom about ⅜ of an inch. The roof should be made tight, so that it will not leak; one side is made of boards; the other side has glass in it, so as to let in the sun, and should face south.

To put in the lining, go to the tinshop and buy some sheets of I. C. tin, and have the tinner turn the edges for clinching, as they do for roofing. Lay the bottom out on a floor, hammer down the clinches, and solder all tight. Take the measure of the inside of the tank, and then turn up the edges and ends of your bottom to that size, making it ¼ inch smaller all around than the inside of your tank. Now put the bottom lining in its place; begin on one side and put in the rest of the lining, one sheet at a time, clinching and soldering as you go. The lining should be bent over the top of the tank, and nailed to the outside with lath-nails.

A tank like the above ought not to cost more than $15.00 and will hold about 3.000 lbs. of honey. When completed the whole of the woodwork should be treated to one or two coats of black or some other dark-colored paint that will absorb the sun's rays and add to the evaporating powers of the tank.

It would be difficult to tell just how fast it would ripen newly extracted honey; it would depend upon the weather and how thick the honey is when extracted. If the weather is cloudy, cold, and damp, it would not ripen the honey as rapidly as it would if it was clear, hot and dry. Here in Los Angeles County, an evaporator the size as described above would (if full) ripen rather thin honey in about 4 or 5 days; it depends upon how thin the honey is, and how thick you want it. You can extract the honey before it is capped over, if you have clear weather to ripen it in.

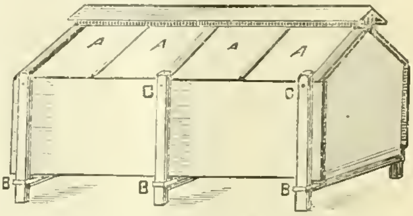

FIG. 2—*Side View.*

Los Angeles, Cal., May, 1882.

* * *

For the American Bee Journal.

Specimens of Apis Dorsata.

WM. F. CLARKE.

Well, I have seen her, and him—worker and drone—two of each, in alcohol. These four insects represent the price of a farm, and are all our friend Jones has to show, as yet, for his Oriental pilgrimages, and those of Frank Benton, in search of "the big bee of Java."

It is a big bee, and no mistake, about four times the size of *apis mellifica*. I am not much of an entomologist, and this description is not meant for the eye of Prof. Cook, or any other scientific expert in the appearance and ways of that division of the animal kingdom called *Insecta*. I can only give the crude impressions of one who has been familiar, sometimes too much so, with our common and improved races of bees.

The *bigness* of this bee is what first strikes the ordinary observer, and next to that its beauty. It is golden-banded like the Italian, and silver-banded too, but with a more decided and larger black terminus to the abdomen, in this respect resembling the Cyprians and Syrians. A bee curled up in alcohol, does not display itself to the same advantage as when on the comb or on the wing, but this bee, stretched out, must be a well-proportioned, handsome insect. The body is large and roomy, giving great capacity for honey carrying; and the wings are long and broad, showing great power in flight. The head is remarkably small and tapering, and if, as is probable, the length of tongue is in proportion to the size and shape of the head, we may hope that this bee will be able to rifle the red clover of its luscious treasures. Its weight, however, will bend over the stoutest stalk of clover, and this may create difficulty in operating on the blooms. Most likely any advantages we may obtain from the advent of this insect, will be the result of judicious crossing. The drone is comparatively small, not so long, I think, as the worker, but aldermanically corpulent, like all drones. I would hazard the opinion that he is not too large to mate with the bees we have. The possibility of a cross the other way is more doubtful to my mind, for if the Java queen is large and long as compared with the worker, like the races of bees which we now have, she must be not only an Amazonian, but a Brobdignagian creature. If we get even a hybrid variety from *apis dorsata*, our hives must be greatly enlarged, and if we breed them pure, our hives must be quadrupled in size. Frames, honey extractors, comb foundation machines, perforated zinc, honey sections, etc., must all be made on a larger scale. If the mandibles are long, strong, and sharp in proportion to the other parts of this bee's body, I am afraid they will puncture fruit, and then there will be trouble in the camp. At present we have pretty clear evidence that our bees do not puncture fruit, but only avail themselves of the sweet juices liberated by wasps, hornets, and birds. It will be an evil day, if it ever comes, when fruit culture and bee-keeping cannot flourish, side by side.

But, what of the sting? That's my chief trouble in view of the coming of *apis dorsata*. It is all I can do to get along with the moderately-sized stings that now menace the adventurous bee-keeper. When hundreds of thousands of live daggers half an inch long are whirling around in the air, each with a gigantic insect "ready, aye ready" to use it on a poor bee-hated amateur apiarist like myself, I think I shall sigh with the poet,

> "O for a lodge in some vast wilderness,"

and betake myself to parts unknown and unfrequented by *apis dorsata*. But Mr. Jones assures me that they are very amiable insects, and though formidably armed do not know the use of their deadly weapon. It may be so. We know that the horse and the elephant are ignorant of their power, or they would not submit to be bully-ragged about by that tyrant man. But suppose a cross between the Cyprian and Java. Horror of horrors! There will be nothing for it but to take a back seat in

> "Some boundless contiguity of shade"

too dense for a bee to penetrate.

I am not much of a microscopist, and Jones' microscope is not of very high magnifying power, but if my observations were correct, the sting of *apis dorsata*, like that of the bumble-bee, is without barb. Let us hope it will also be found to be without virus, and that the "big bee of Java" will be like the big Shanghai fowls in disposition, as compared with the game breeds.

Among other attractions that may be trumpeted forth to attract a large attendance at the next annual meeting of the North American Bee-Keepers Society, there is this, that Mr. Jones will exhibit his four precious Java bees on that occasion. Meantime, for the next four months, I shall have the high satisfaction of holding some such a colloquy as this with not a few of my bee-keeping rivals: "Have you seen *apis dorsata?*" "No," "Well, I have."

Listowel, Ont., June 5, 1882.

* * *

Rural New Yorker.

Parthenogenesis in Bees.

PROF. A. J. COOK.

In the current volume of the *Scientific American*, page 186, there is given an abstract of some experiments of one Abbe Giotto Ulivi, in reference to parthenogenesis among bees. The conclusions drawn from these experiments are as startling and absurd as would be the assertion that the progeny resulting from mating the horse and the ass would be anything but a mule. The statements made not only contradict some of the most thoroughly settled truths of science, but actually contradict the every-day experience and observations of every intelligent and observing apiarist. I should not think that these wild assertions were worthy of notice, only that some of the papers, even the bee papers, give the article a place, and make editorial comments that would lead one to think that there was good ground for the opinion that Huber, Dzierzon, Langstroth and a host of others were all mistaken, and did not see what they said they saw. Is it possible that one unknown man's mere assertion shall weigh more than the testimony of many widely known and thoroughly reliable men, and they, too, often men of the very highest scientific attainments?

The following are the points which are denied, most of which are easy of demonstration, and some of which are proved by the daily experience of every bee-keeper:

1st. Queens are impregnated outside of the hive, and while on the wing; 2d, they are fertilized but once; 3d, drones are killed in mating, and some of the genital organs torn off; 4th, the eggs which hatch into drones are not impregnated, and so the law of parthenogenesis is true among bees, so far as the drones are concerned; 5th, eggs from virgin queens will hatch and all of the bees be drones; 6th, some worker bees will lay eggs. Such bees, known as fertile workers, have never mated, and all the eggs from them produce drones.

That queens are fertilized without, and not within the hive, is very easy of demonstration. In fact it is demonstrated in nuclei hives by the hundred every year. I have demonstrated it in several ways. I have clipped one of the wings of queens many times, just as they emerge from the cells, and in every case I had a drone-laying queen, if she laid at all; though in many cases there were scores of drones in the hive. Of late years I have had only drones in one or two of my choicest hives, having taken care to keep them from all the other hives; and in my small or nuclei hives I seldom have any drones. In such cases, if Ulivi is correct, fecundation would never occur; yet I almost never fail to secure fertilization. I have often shut the young queens in the hives, often with drones, and and never would I secure fertilization till she was allowed to fly forth. From our every-day experience it is hardly possible to refrain from the conclusion that Ulivi is a fraud.

It is just as patent that queens are only fertilized once. My queens that are in droneless hives, and with wings clipped so that they cannot fly out, are, of course, utterly precluded from a second mating, and yet they remain fertile and lay worker eggs just as long as other queens that have good wings, or are surrounded with drones.

It is not so easy to prove that drones are killed or mutilated in the sexual act, though I have little doubt that it is true. I have seen several cases of bumble bee mating, and in every case the drone was killed. The honey bee is so nearly related to the bumble bee that it is very certain that the same is true of it. Again, the drones, if held in the warm hand on a warm day, will experience orgasm, and at once die. Mr. D. A. Jones found that he had lost a great many more than the usual number of queens as they flew forth to mate, on his islands last summer. This is easily explained on the theory that the drone expires in the sexual act and falls to the ground and drags the queen with him. In the water she would not be able to rise, and of course would be lost.

Of course, I do not positively know by actual observation that the white thread that hangs from a queen as she comes from mating, is a portion of the male genital organs. But I have found, with many others, that queens I had shut in the hives for five days after they had emerged from the pupa state, and then let out to fly, would, without exception, commence laying if the white thread was appended to the abdomen, even though there were no drones in the hive, and would fail as surely to lay worker eggs, when the white filament was absent. I have had several experimental queens reared in the early spring, before there were any drones, and they would fly out every day and return, but never carry the filament attached to the abdomen. Any one can easily try this, and will become convinced very soon that with no drones there will be no thread.

That drone eggs are fecundated, will be very surprising to the many apiarists that have reared queens when there were no drones, in late fall and early spring, and found that there were abundant eggs laid, but that all produced, without exception, drones. Ulivi's assertion that eggs remain over the winter, might find credence before the days of foundation, but now it will fall so flat that it will have only two dimensions.

Ulivi's last statement—that there are no such bees as fertile workers—makes me think of Byron's remark in reference to Bishop Berkley: "When Bishop Berkley said there was no matter, it was no matter what Bishop Berkley said." It is an exceedingly unfortunate time to throw such a remark at American bee-keepers. Our new bees—the Syrian and Cyprian—will give us fertile workers with more facility than Ulivi can make unwarranted statements. Such an assertion needs no refutation in America, no matter what is true in Europe.

Michigan Agricultural College.

[Prof. Ulivi has written a long letter to *L'Apiculteur* for June, 1882, published in Paris, France, replying to many strictures that had therein been made to his peculiar theories. The editor of *L'Apiculteur* announces the close of the debate in the following words: "We now declare the affair heard on both sides, and consequently the debate closed. If we judge correctly, the author of fecundation in the hive will now have to talk to the wind!"—Ed.]

Farmers' Home Journal.

What is a Fertile Worker ?

G. W. DEMAREE.

Several correspondents have of late substantially asked the question which we have chosen for a caption to this article, "What is a fertile worker?" The question is a fair one, and is of sufficient importance to justify an answer in detail. The question is usually answered by saying that a fertile worker is simply a worker bee that possesses the power or functions to lay a few eggs, which hatch out drones only. "Is this all?" It is all that we can see with our eyes, but if we study the natural history of the bee (*Apis mellifica*), the phenomenon resolves itself into a proposition supported by an abundance of reason, and is certainly just what we must or might expect as a result of the peculiar laws that govern in the process of perfection of the queen honey bee.

The worker bee is a female in every respect that the queen is. The same egg which produces a worker bee, when under the conditions adapted to that end, will produce a queen when placed in a position favorable to the development of a queen. I have demonstrated this proposition time and again by removing the infant larva from the royal cell in a hive of black bees, and substituting for it a worker larva of the same size from Italian stock. If skillfully done, you will change the bees in that hive and demonstrate to your entire satisfaction that the difference between the queen and the worker is simply and solely a matter of development. It is a well-known fact that a queen is good or indifferent in exact proportion to her development.

With these facts before us, the question, What is a fertile worker? is logically answered. A bee reared in accordance with nature's laws governing the processes which perfect the undeveloped (female) worker bee, though sufficiently developed to enable her to lay a few eggs, is not a queen; she is a fertile worker. Worker bees being undeveloped females, is it not reasonable and probable that some of them will be more developed than others, and that now and then one may be sufficiently developed to lay a few eggs?

Such are the facts, and they are supported by reason.

Christiansburg, Ky.

London Journal of Horticulture.

Progress of Bee-Keeping in England.

A. PETTIGREW.

In practical and scientific apiculture considerable advancement has been made during the last ten or twelve years. Though slow the progress has been certain and encouraging. Many clever apiarists of the present time had not mastered the rudiments ten years ago. This advance has been made amidst the discouragements of unfavorable and disastrous seasons for bee-keeping in England. If the country had had seven years of sunshine out of the last ten instead of seven years of cloudy and unpropitious weather, the value of bees to the community would be better known and consequently more highly appreciated. Notwithstanding the inclement seasons and unfavorable harvests, bee-keeping is moving onward in the right direction. Knowledge is spreading; inventions great and useful are introduced; old and experienced men use them with advantage and grasp the whole subject of bee-keeping more firmly. Many young men who a few years ago were commencing attention to the subject have advanced and are expert in all manipulations in the apiary. Much knowledge has been widely spread during the last few years, and almost everywhere happy results are already evident. We predict that the progress will increase, and that bee-keeping will yet become a source of happiness and profit to thousands of the rural population of Great Britain and Ireland.

During the last ten years we have lamented the misfortunes of beginners, for two destructive seasons killed every bee in some gardens; in others one-half, two-thirds, or three-fourths were lost. Other seasons, not destructive, but unfavorable for honey-gathering, caused great disappointment amongst beginners. Some lost heart altogether, and some thought that a change of hives from straw to wood, or wood to straw, would bring success. In many cases the change was made at some expense without better results. Apiarists are, however, very hopeful. A few days ago I had a letter from an experienced bee-keeper in the north of Scotland, who is anticipating a bright and successful future not remote. And why should he not? People who plant orchards look hopefully forward, and derive encouragement and pleasure by considering the future. Bee-keepers who have been successful some years are like other successful men in expecting greater success in the future.

The introduction and use of artificial comb foundation is a marked improvement in the management of bees. Supering is made easy by the use of these foundations—easy for both bees and their masters. By filling supers and sections with the foundation the bees readily adopt them, and soon begin to thin the wax and lengthen out the cells, and make them ready for the reception of honey; thus the bees have less wax to secrete and more honey to store. The stronger foundation used for brood combs are as useful as those used in supering, for if given to first swarms at the hiving time, breeding commences at once, even before the cells are finished the eggs are deposited on the foundation, and the cells are afterward built around them. If supering is made easy by employing comb foundation, progress in breeding is also made by their use. We thank the American bee-keepers for the invention and introduction of comb foundation.

We are also, I think, indebted to the American bee-keepers for the introduction of sectional supers, which are useful in the retail honeycomb trade. Sections of 1 lb. and 2 lbs. of comb are very salable, easily handled and carried. These small sections when well filled are so presentable and tempting on breakfast and tea tables that commendation is quite unnecessary. If exhibited for competition at honey shows they should be judged by number or weight from a given hive or from a single apiary. Larger supers of glass and wood are more sensational in exhibitions. Bee-keepers who study profit will use the kind of supers most salable in the market. Last season our glass supers, nearly 20 lbs. each, were sold at 2s. per lb.; straw and wood supers at 1s. 4d. and 1s. 6d. per lb.

The attention that is now given to the comforts of bees by advanced men is another evidence that progress is being made. A few years ago hives were not sufficiently protected in winter. Bees are natives of a warmer climate than that of England, and therefore suffer much in our cold winters. Many bee-keepers now know this and cover their hives well in winter. For many long years the most advanced bee-keepers in Scotland have covered their straw hives effectively. The advanced men of the bar-frame school are now having hives made with double walls, and fill the cavities between the walls with chaff. This is a great improvement, and in severe winters these chaff hives may be trusted to protect the bees. The honor of the invention of the chaff hives belongs to America. One more invention or discovery will perfect the bar-frame hive—namely, a material more porous than wood, which will permit the moisture of bees to pass through and out of the hives. We have so many clever bee-keepers seeking improvements now that I believe the discovery will be made soon. Meanwhile many men are doing what they can to ventilate the wooden hives and make their bees more comfortable during winter.

Evidences of progress in bee-management could be easily drawn from many points of practice now extensively followed. One pleasant feature of the progress already made by bee-keepers I would like to notice. It is the fact that they now write and speak more kindly of those who differ from them in opinion than they did some years ago. The best men amongst us—the real Samsons of bee-keeping—refrain to a great extent from employing dogmatic language. They know well that whatever is true in science and the practice of bee-keeping will advance steadily, and sooner or later establish itself. On many questions much can be said on both sides; therefore let us act on the principles of "free trade" and fair play in exchanging opinions, always remembering "kind words never die," and also that "charity never faileth."

Bear in mind that great results more frequently come from perseverance than from great strength—"A falling drop will cave a stone."

Bowdon, England.

For the American Bee Journal.

How to Hunt Bees in the Woods.

F. M. JOHNSON.

You require a small box (which can be made of any kind of wood). The box is of a slanting shape, and should be made according to the following dimensions: Bottom, 4x6 in.; sides, 4 in. at one end and beveled down to 1½ in. at the other; end pieces—one, 4x4 in., the other 1½ deep by 4 in. long. The top should be a separate piece, and made as follows: Width, 4 in.; whole length, 12 in. cutting down 4 on one end for handle, and inserting a glass 3x1 in. flush with the under-side at the other end, as near the end as convenient.

The box should contain a piece of honey comb about 1¼ in. in thickness, which should be scented with bee-bait (the directions for making this are given below), covering the bottom of the box. Taking the box in the left hand and the cover in the right and approaching the bee while at work on the flower or shrub, you insert the box under the bee and quickly putting the cover on the top (in such a manner that the light can shine in), you have the bee secure in the box, then put the box on a stake 3 or 4 feet high, taking care not to jar the box more than necessary. Then shove the cover down so as to shut out the light from the glass, when the bee will go to work on the honey, which can be ascertained by holding the ear to the box, as it will cease its "humming" as soon as it commences on the comb. Then the cover can be taken off and the bee will remain on the honey. Then take a position where you can have an unobstructed view of the box and its surroundings, and wait for the bee to come out, which it will do in from one to three minutes, and commence circling in the air, gradually enlarging the circles until it finds its latitude at which it will immediately start in a direct line for its home, and here care must be taken to accurately mark the direction it goes. You must now wait for a short time, when the bee will return and re-enter the box, which it will repeat as long as the box remains. If the tree should be near by other bees will accompany it on its second or third return; if at a great distance it will take a longer period for the bees to "double up."

If you have gotten 15 or 20 bees at work on the line you can safely take the box to a point as far distant, in the course the bee has taken, as you choose, being careful not to pass where the bee is likely to tree, as they will not follow the other way. Now open the box again, and if you are on the line the bees will find it in a very few minutes. If they do not you will know that you are off the line or have passed the tree and should move your box to a point that you know is on the line. This is to be repeated until you run the bee to its tree.

If you have but a few bees it will be necessary to shut them in the box and move them in this manner from 30 to 60 rods at a time, then open your box and wait for them to go and return. This is to be repeated until you have found the tree.

Cross lining is important. If anything should prevent you from following the bee in a direct line from where you first start it, you can move the box a distance to the right or left and start it again, by which means you can center the bee on some prominent object whereby you can invariably locate the tree within a radius of 5 or 6 rods.

Half an ounce of tincture of Annis mixed with a half dozen drops of oil of Organum, to be kept in an air-tight bottle.

Instead of using honey in your box, put a quantity of granulated sugar in a bottle and dissolve it with cold water until it becomes a thick syrup, and fill the comb in the box with this liquid, which is better than the real honey.

Greystone, Conn.

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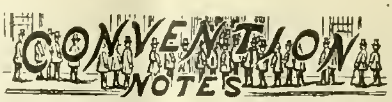

Read before the Marion Co., Ind., Convention.

Comb or Extracted Honey.

F. L. DOUGHERTY.

In answering the question—"Which is the most profitable?" I would decide at once in favor of extracted honey. The phrasing of the sentence implies that the bees are to be worked for the best results, the greatest profit, regardless of other considerations. Still, in deciding which is the most profitable in individual cases, various circumstances and conditions must also be considered, and can only be decided by each one for themselves.

As to the relative amount which can be secured in ordinary seasons, the yield of extracted will double that of comb honey, and at other times it may be possible to secure quite a fair crop of extracted honey, while the bees would not have one pound of comb honey. As, no doubt, all of you know, the secretion of honey depends almost entirely on atmospheric conditions. There may be several days at a time when the bees will scarcely gather anything, when on account of favorable weather, a few days will come when the flowers seem literally filled to overflowing with nectar, and these few days may constitute the entire honey yield of the season. If at times like this, the hives be well filled with plenty of empty combs, the amount gathered will be surprising, but if the bees must stop to build the comb in which to store the honey, the surplus secured will be but very little, if any at all.

In producing extracted honey, particular attention should be given to quality, and every drop should be well ripened before it is closed up in casks, cans, or jars. None but a thoroughly good article should be placed on the market, as the price and future sales will depend very much on the quality of honey you offer.

As a general thing the difference in price between extracted and comb honey ranges at from 5 to 8 cents per pound, but where you have a good home market at retail, extracted honey will bring within a few cents of as much per pound as comb honey. As far as practicable each grade of honey should be kept separate. In order to do this a vigilant watch should be kept of the different bloom. The white clover honey should be extracted closely before the basswood blooms. A little clover in the basswood honey, however, will not do the harm that would result if the proportions were reversed. Basswood honey has a peculiar flavor, and it should not be allowed to become mixed with any other kind of honey.

As to how fast the honey should be taken, we think it makes but little difference in its quality, providing it is given the proper care afterward, and we would like to impress on your minds the very great importance of this care. New extracted honey should stand in open mouthed vessels for quite a while before being closed up, so as to become thoroughly ripened. It should also be borne in mind, that with the extractor we are likely at times to take every pound of honey in the hive, and if at a time like this, the flow of honey should cease suddenly, the bees must be fed, or they are likely to perish for the want of necessary stores. A necessary point to be taken into consideration is the time necessarily required in extracting honey, for during good yields the honey must be removed every third or fourth day, for generally colonies run for extracting are not so likely to swarm, unless neglected, and are very full of bees.

Northwestern Wisconsin.

The N. W. Wisconsin Bee-Keepers' Convention met in LaCrosse, Wis., June 9, 1882, at 10 a. m., Pres. Markle in the chair. Minutes of last meeting were read and approved.

Wm. Lossing moved that the meetings hereafter take place about May 1 and October 15. Carried.

The President called for a report from all the members present as to the successful wintering of bees the past season. The loss reported was about one in fifty.

W. Lossing complained of being troubled with a species of bee-destroying bird. The bird he said was a trifle larger than the kingbird, of a brownish color, with white breast. He said he shot 57 in one day.

Pres. Merkle complained of being troubled a great deal with the kingbird, and thought the best way to dispose of them is with a good shotgun. He asked the opinion of the members as to the best bee-hive, and it was generally agreed that the Langstroth was the best; at any rate, a hive to be better must be on the same principle.

The question arose, "Would it be proper for the Society to place a price on honey, and to appoint some one to mark it according to grade?

Mr. Lossing was of the opinion that, as he understood G. J. Pammel to say he would open a honey depot at LaCrosse, all the members could let him have their honey, and he would dispose of it as he best could.

Question—Does bee-keeping pay to make a specialty of it? Upon this question quite a discussion arose. After several members gave a statement of their bee account, it was agreed that it does pay.

Question—What is the best method for compelling the bees to work in the second story? Answer—Take one or two frames of brood from the brood chamber, and put them, with a few bees, into the second-story, when the bees will take care of the brood and commence work in that apartment.

Question—Has any one seen a queen in the act of fertilization, and what were the results to the drone? Mr. Lossing said that his assistant had seen a case, and that the drone died instantly, showing that it performs one duty.

Question—How does a bee get pollen on its legs? Answer—It takes the pollen from the flower with its tongue, and puts it on one of its fore legs, from whence with a quick movement it transfers the pollen to the hind legs.

Question—How does the bee get the pollen off? Answer—It backs into the cell and shoves the pollen off with its middle legs.

Question—What queen cells produce the best queens? Answer—Remove the queen from a strong colony that has plenty of brood and eggs, then cut a strip of comb from the bottom of a whole comb with eggs in, about one inch wide, giving the bees plenty of room to build large queen cells. Select the best from the whole number, and you will be pretty certain to get good queens.

The President spoke of the effect of extracted honey on the market. He looked upon it as a great evil, and only there to make room for fraud.

Messrs. Lossing and Pammel rebutted the remarks of the President, after which he expressed a determination to buy a honey extractor.

The Convention adjourned.

G. J. PAMMEL, *Sec.*

Madison, Wis., Convention.

The monthly meeting of the Madison, Wisconsin, Bee-Keepers' Association, was held at Madison on Saturday, June 10, at 7.30 p. m., and was presided over by Prof. R. B. Anderson. Papers were read by Dr. J. W. Vance, C. Spangenberg, D. D. Daniher and Prof. Anderson.

Mr. C. Spangenberg, on the subject of swarming, said: The month of June is the real swarming month among bees. It then often happens to bee-keepers, who like to have large swarms, and do not care to increase the number of hives more than absolutely necessary, that they are at times troubled with the so-called swarming fever. Although we may have destroyed all the queen cells one day, the same hive may show signs of swarming the next day, and this may be followed by a second attempt, nay, even by a third and fourth, simultaneously, so that we get a genuine revolution in the apiary. To suppress this, I open the hive and sprinkle a small amount of water over and between the frames, which at once quiets the bees. Then I either give them more room or make a new swarm by taking two or three frames of brood and bees, out of each of these hives, or the same excitement will occur again the next day; for at such times they work continuously on queen cells. As the swarming fever keeps the bees away from their work of making honey, it is necessary that the bee-keeper should be on his guard to prevent the occurrence of such periods.

Prof. R. B. Anderson gave the following on bee-keeping and its advantages: Our fields and forests produce immense quantities of flowers that can be utilized and made to increase our wealth, if bee-keeping as a pursuit is properly encouraged and adopted.

I know but very little about bees, but it has occurred to me to ask how much the wealth of our state and country might be increased by a judicious adoption of bee-culture. We know that we cannot raise wheat and potatoes on the same piece of ground at the same time, but it seems that bee-keeping instead of interfering in any way with the productiveness of a farm, is absolutely beneficial to the plants from whose flowers the bees gather their pollen and honey. Nor does the keeping of bees require much of the bee-keeper's time. I heard a farmer who keeps about 50 colonies of bees and sells about $200 worth of honey every year, say that he considered this money clean profit, since the bees took care of themselves and claimed no part of his farm for their special feeding. He added that the bees were his only animals that did not annoy him. His horses, and cows, and sheep, and pigs were always after him, teasing him for something to eat, while his bees only asked to be let alone.

As stated, I should like to know to what extent our food produce could be increased by a judicious adoption of bee-culture the country throughout, and I think the results of a fair calculation should be pressed into the notice of the public. They tell me bees will go miles after their pollen and honey, and that therefore every man in the city might keep bees, and in this way furnish his household with the necessary amount of pure and delicate sweet. I do not know how this may be.

I suppose if every family in Madison went into bee-culture, the supply of pollen and honey from flowers would be exhausted, and the amount of honey we should get would be much smaller in proportion than if only a third of our citizens kept bees; but then, on the other hand, the honey-yielding flowers and trees might be vastly increased without any great effort on our part. Indeed, I do not think a selection of trees and flowers with reference to the needs of bees would lessen the beauty of our streets and gardens, and in many instances the gain to be received might stimulate many of our citizens, who now neglect their shade trees and flower gardens, to plant more trees and raise more flowers, thus positively adding to the beauty of our fair city. Bees need intelligent care, but the amount of time required to see to them is so small that no other business in which the bee-keeper is engaged need to suffer on account of his bees.

The meeting adjourned to the evening of July 8th, at which time others will present valuable papers.

* * *

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

SELECTIONS FROM OUR LETTER BOX

Motherwort.—Please give name of plant inclosed, and its value as a bee plant. The bees work on a small bunch in our yard from morning until night, notwithstanding we have the most profuse white clover bloom. It is now six feet high, and full of bloom from root to top. It seems to secrete honey during the entire day. Weather fine and bees doing splendidly.

O. N. WEAVER.

Minerva, Ky., June 19, 1882.

[It is motherwort, and an excellent honey plant. Scatter the seeds from your small patch along the lanes and fence corners. It will take care of itself thereafter.—ED.]

Sudden Transition.—A more discouraging spring could hardly happen, than that just past. It would have been very disappointing had it followed three good winters and summers; but coming upon the heels of three years that had gone from bad to worse, and then to worst, it was disheartening indeed. One could examine bees in the last days of February; March was encouraging, as a whole, and the first ten days of April all the most ardent lover of apiculture could have wished for; but from that date frosts, cold, rain, and winds were the order of the day, so that the middle of May found bees starving and unable to leave the hive, even had there been bloom, until June. But at this date the prospect is really fine for the future. White clover is indigenous here; and so abundant that it is almost a pest, crowding out other grasses. An abundance is in bloom now, and the ground is matted with that which came from the seed this spring, and which promises to bloom this year; so that we shall probably have a much longer honey season than usual, while the flow is already abundant. A week ago bees were on the verge of starvation, and now supers must be put on or the queens will be crowded. Even melilot sown last winter is branching and will bloom this season. Near my hives is a patch of five acres of white, alsike, common red, and mammoth clovers. The hybrids and blacks favor the white; but alsike is the favorite with yellow bees, though they work on common red where the corollas are shallow, and I have seen them working between the flowerets. On mammoth clover I have not seen a honey bee this spring. Sometimes, though rarely, I have seen them on white and alsike at the same flight. Flowers are unusually fragrant this spring, and especially blackberry, and bees took to it as well as they ever do to raspberry. I am heartily glad to see the JOURNAL take a determined stand against adulteration; but I have not the slightest hope in repressive measures, though preventive measures are practicable. When we come to understand the nature of the soil, in its relation to society, and enact laws that will effectually prevent the divorcement of labor from the land, adulteration, with a thousand other crimes will be prevented, and not till then. One-third of our farms are rented; half of them are mortgaged; and the price that labor pays to get at the soil is all that can be made above a hard living; hence, so many are driven into necessity, and by necessity, or the dread of it, into crime. No amount or kind of legislation will avail until we cease this foolish attempt to legislate wrong into right—night into day; and until we are not only willing but do follow natural right and justice.

WM. CAMM.

Murrayville, Ill., June 12, 1882.

Questionable Borrowing.—I see that my "Mating of Queens" is inserted in the *Iowa Homestead* and in the *Iowa Live Stock Journal*, without credit to your paper. I furnished only one copy, and that one to you.

Des Moines, Iowa. J. M. SHUCK.

[This questionable method of filling up a paper occurs frequently—in fact, too often to be always pleasant to the enterprising publisher who secures his corps of contributors at a considerable outlay of time and much trouble. We feel great pleasure in having correspondence, editorial and other matters copied from our columns and properly accredited; but when they are appropriated as though prepared for and appearing originally in such paper, we feel as would a merchant who had been robbed of part of his stock in trade.—ED.]

Rearing Queens in Utah.—Since I last wrote to you I have been engaged in queen-rearing, as quite a few have expressed a desire to have a queen from my bees, they being Italians, the bees in this city mostly being hybrids, and a few of the black bees. I divided on the 16th of May, and in a few days after had 10 queen cells in 2 of the hives which I had divided. On the 22d I took 4 of those cells and gave them to a bee man in this city, he taking an active part in assisting me in the queen business. On the 30th of May my first queen was hatched, with 3 cells still remaining in the hive. I formed 4 nuclei by taking 7 frames from my remaining hives. One of the queen cells I left in the hive I divided was 2½ inches long from the face of the comb. I thought that it would be a prize queen, but in examining the comb a few days after, I found the prize cell gone and no queen in the hive. I also took the queen that hatched the 30th, having taken it out on a frame of foundation where I found it first. My method of introducing the queen was in this manner: I took the frame of foundation which I had kept and put it into one of the nuclei wherein the queen cell had not hatched out, but was torn down, and last week I found her in the same hive laying and apparently at home. The bees get plenty of water in this district, as we irrigate our gardens every week, and have a pure stream of water pass our door all the time. JOHN DUNN.

Tooele City, Utah, June 14, 1882.

Prospect Good for Basswood.—Bees are doing nothing with us in Canada at present. The white clover is only beginning to blossom. I had to feed some of my bees; they killed off most of their drones; some of the colonies drove them out till the ground was covered with them. Do you think they will swarm after killing the drones? The hives are full and running over with bees ready to gather the honey. I think in a few days we will have a flow of honey. There is a good prospect for raspberries, and white clover is beginning to blossom. There is promise of a basswood honey harvest, as the trees are full of blossom buds. WILLIAM COLEMAN.

Devizes, Ont., June 16, 1882.

[Yes; they will provide more drones when they become strong enough, and the weather and honey-flow are favorable for swarming.—ED.]

Coffee A Sugar for Winter.—Apple blossom season closed on the 12th inst. in this locality—fully two weeks later than last year. Bees have been booming in consequence, and have occupied about one-half of the day time in securing the nectar. The rains and extremely cool days and nights have been detrimental to them, but they have done well. White clover promises to be abundant, and will be out in about a week when the bees will "boom" again. This is also about two weeks or more later than last season. My colonies number 30, mostly Italians. They came through last winter with little loss, wintered, as usual, on summer stands, in double-walled chaff hives; 20 colonies are ready to go into the boxes soon as the honey flow commences again, and the others will be ready for the basswood flow, which I have seldom known to fail in this locality. My bees were wintered in 1880 and 1881 without loss, out-of-doors in chaff hives. I practice stimulative feeding in the spring to get my bees ready for the first honey flow, and have usually been successful. I have never had a case of dysentery in my apiary. I fed pure coffee A sugar for fall and winter stores, but never any glucose or grape sugar, or poor honey. Pure coffee A sugar is the best for wintering bees, and if a case of dysentery can be shown where a colony has been wintered on this alone, I have yet to find it out. Of course, this must be melted so as to be of the proper consistency, and then fed early enough to give the bees time to cap it over. Do not trouble about pollen, that will take care of itself—the greatest trouble about it is that too frequently there is an excess of it, and that is detrimental to the health of the colony. If I remember correctly, I read an article in the BEE JOURNAL early this year from a bee-keeper of about 40 colonies, who professed to have fed about 500 lbs. of bran or rye flour in his own apiary; possibly I am mistaken, but think not. To say the least, I cannot see how it was done, and what the necessity was. Beginners are often troubled about getting bees started in the surplus boxes. I have had but little trouble in that way; first supply the boxes with starters of natural comb or foundation, and then raise a frame of brood or honey from the brood chamber to the storage apartment, and the bees will commence business at once, unless the hives be too warm; in that case, give good ventilation. The vacant space in the brood chamber must be supplied with a frame of foundation or comb. E. F. SMITH.

Smyrna, N. Y., June 15, 1882.

Spring Dwindling.—Bees wintered well in this part of the country. One man living near me only lost one colony out of 106 up to the time he took them from the cellar, but since the bees were put on the summer stands they have gone back a good deal, owing to the cold, windy weather we have had in the month of May. The loss of bees since putting them out this spring, up to the present time, will range from 10 to 25 per cent., and a good many of those remaining are not in a promising s a e.

S. HINMAN.

Dundonald, Ont., June 14, 1882.

Queen Shipping Cages.—As the safe shipping of queens by mail does not seem to have yet reached perfection by every shipper, I will give a little of my own experience in that line—not as a shipper, but as a receiver of queens. During the last few years I have had sent me between 100 and 200 queens, by about a dozen different breeders, no two of whom have put up their queens in exactly the same manner. Some lots reached me all dead, some all alive, with attendant bees bright and clean as when first started on their journey, and some in all kinds of condition between the two extremes. The shipper who has had the most uniform success, uses the old-fashioned wood cages, sends about 8 or 9 attendant bees with each queen, and provisions with candy in the cages and a sponge or bit of cotton saturated with honey at the sides of each cage, with wire-cloth between the bees and the honey. This man has sent me some 50 queens in all, every one of them having reached me not only alive, but clean and bright, and what is still more uncommon, the same is true of all their attendant bees, with the exception of one bee only. It is a great advantage to know that a certain number of queens is sure to arrive in good condition within one or two days of a known time. My poorest success in receiving queens in good condition has been with those sent in Peet cages. I supposed this experience of mine was unusual, until I was told by an extensive shipper, while at the National Convention last fall, that after having lost heavily by using this cage for shipping purposes, he had abandoned it, and gone back to the old-fashioned wooden cages. I do not know by experience how unpleasant it must be to a shipper when he receives notice of a loss of queens while in transit, but I do know how much it bothers a receiver to take dead queens out of the postoffice, and have to wait two to four weeks for others in their place.

O. O. POPPLETON.

Williamstown, Iowa.

Enigmatical.—I send you to-day, by mail, a queen cage with a piece of comb partly filled with sugar. This was stored in the past 10 days, and I am at a loss to account for it. You will observe that the honey has become solid as fast as deposited, and it is out of the question to extract it. I am at a loss to know what to do. I cannot extract, and the hives are about full; bees are idle for want of room. I have about 400 wired frames in this condition. Will you please examine and advise? I cannot tell what the honey is stored from; the hives have been extracted regularly this spring, so it is not old honey.

H. N. WILDER.

Forsyth, Ga., Jnne 17, 1882.

[The piece of honey referred to above has been received, and it is a great curiosity. There are no cells capped on the piece sent us, but the honey in them, which is white as basswood honey, is crystallized quite solid in the cell, with a watery appearance. These pellets or crystals can be lifted out entire with the point of a knife, and do not exhibit that tendency to crumble or run generally found in granulated honey. The strangest feature about the honey is its taste, which is neither like honey nor sugar, but more nearly that of epsom salts, sweetened—at least the sample received appears so. We do not know what it could have been gathered from, never having seen anything like it before; nor can we advise what to do with it, as we do not know what effect it will have on the bees. If it will agree with them, it might be saved over for spring feeding, but we would be afraid to attempt to winter on it, at least without having experimented with its sanitary effect. You might have some competent chemist in your city analyze it.—ED.]

Things Look Brighter Now.—This has been the worst season on bees I ever knew, but things look brighter now. We are having a good flow of honey now. It has also been the worst spring for queen-rearing I ever experienced. D. A. PIKE.

Smithsburg, Md., June 15, 1882.

Difference in Location.—I have 10 colonies in the country on the river bottom, and 18 here in Clarinda. To-day I went out to see how they were getting along in the country, and found they had gathered but little honey, while those I have here are breeding nicely and in some hives are sealing up new honey. The distance between the two places does not exceed two miles, and I cannot account for it, unless it is a washing rain that swept off the river two days before, almost missing us here, just giving us a gentle shower. We have more white clover here than on the bottom; but out there is sumac and basswood—the former now almost ready for the bees. I think when we figure up at the close of the season, that the results from the country will compare favorably with those in town. I have succeeded beyond my most sanguine expectations in making comb foundation. After taking a lesson from Mr. Craig in Missouri, I melted the beeswax, and the first dip I made peeled off the plate without trouble. Feeling somewhat elated at my success, I kept on until I had 40 lbs. of nice sheets, and afterward succeeded as well with the machine as in dipping.

J. L. STRONG.

Clarinda, Iowa, June 14. 1882.

Large Yield Expected.—This spring has been so late, cold and wet here that it has been very discouraging to bee-keepers. My bees wintered excellent in my plastered hives, on the summer stands, better than those in single-walled hives in the cellar. They went into winter quarters with a good supply of honey, but it was so warm and pleasant in February the queens commenced laying early and rearing brood, which caused the consumption of a great amount of honey, and the cold rainy spring and unfavorable weather caused them to spring dwindle badly. Some colonies died. On the first day of June the weather changed from ridiculous to sublime; white clover put in an appearance, and bees are now "booming;" in fact, I never saw bees gather honey and rear brood so fast as during the last week. They are working in sections and swarming in every direction. Bee men that a month ago were blue as indigo, now feel like "the cow that jumped over the moon." We are having a large white clover bloom, which is our principal honey resource, and I look for a big honey flow from this out. A. W. FISK.

Bushnell, Ill., June 19, 1882.

Osage Orange for Honey.—Bees in this county wintered extra fine. The first of April they were strong in numbers, but the cold and wet weather has had its affect. Fruit bloom done but little good. The 4th of May was a glorious honey day; the bees worked with the spirit of desperation till 4 o'clock p. m., and then the blizzard struck. The next day that was good (June 9), my 25 colonies all flew strong. I kept a close watch of all colonies, and when their honey was exhausted I fed moderately with quite thin sugar syrup. Although it rains every other day, white clover is plenty and is yielding honey remarkably well—people come along and tell me my bees are swarming. The air is melodious with their joyful hum, the combs are being lengthened out very fast along the top-bars. To-morrow I shall put on a good many cases of sections. All kinds of vegetables are at least three or four weeks late. We are pretty sure now of about 2½ months of fine white clover bloom. Heartsease, one of the best of honey plants with us, is very plenty in wet cornfields, and is there to stay. I feel as though my prospects were never better for a *good, big* honey crop. I think swarming will commence in about a week or ten days. I am more than pleased with the BEE JOURNAL. I admire the way you sting adulterators. I inclose a few Osage orange blossoms. The bees work on them very eagerly. PHILIP P. NELSON.

Manteno, Ill., June 21, 1882.

A Screen to Protect from Robbers.—I make a frame of 1x2 inch strips, 3x6 feet, and 6 feet high; line it all around with mosquito bar; put an oil-cloth on top to darken it, and put a door in one end, with wire-screen or mosquito bar covering, and hang it on hinges, as you would a screen door. When robber bees are around and I want to open a hive, I place this over the hive, go in and shut the door. When done, move the screen from over the hive, and all will be safe. J. T. BRUTON.

Joplin, Mo.

Working on White Clover.—Bees are doing finely now, and have worked on white clover since June 10. To-day the weather is cold and chilling, with rain. Had my first swarm June 16. I will have new extracted honey in a few days. G. J. PAMMEL.

La Crosse, Wis., June 19, 1882.

Early Swarming.—I had a swarm of bees, a very large one, the 30th day of May. It looked queer to see a swarm of bees flying in the air when the trees were not yet leaved out, though the dandelions were in blossom. My bees are in fine condition, storing honey from raspberry blossoms in sections, of which there is an abundance. G. H. ADAMS.

North Nassau, N. Y., June 19, 1882.

Satisfied with Prospects.—I have 18 colonies of bees, and all are doing well now. GEORGE KIME.

North Liberty, Ind., June 22, 1882.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

OLDEST BEE PAPER IN AMERICA — THE AMERICAN BEE JOURNAL — ESTABLISHED IN 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance.

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DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance:

For **4** weeks		**10**	per cent. discount.
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" **13** "	(3 months)	**30**	" "
" **26** "	(6 months)	**40**	" "
" **39** "	(9 months)	**50**	" "
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Discount, for **1** year, in the MONTHLY alone, **25** per cent., **6** months, **10** per cent., **3** months, **5** per cent.

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THOMAS G. NEWMAN,

925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

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☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

◆

☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

Local Convention Directory.

1882. *Time and Place of Meeting.*

July 8—Madison, Wis., at Madison, Wis.
25—Western Iowa, at Winterset, Iowa.
Henry Wallace, Sec., Winterset, Iowa.
Aug. 10—Maine State, at Harmony, Maine.
Wm. Hoyt, Sec.
Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.
Oct. 3-6 North American, at Cincinnati, O.
Dr. Ehrick Parmly, Sec., New York City.
5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.
Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

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Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., June 19, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for honey is quiet. Extracted brings 7@10c. on arrival. No comb honey on the market worth mentioning, prices nominal.

BEESWAX—Scarce, and brings 20@25c. on arrival. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey is light, prices being made to meet views of purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

NEW YORK.

HONEY—White clover, fancy, 1 lb. bxs., 15@16c.; white clover, good to choice, 1 and 2 lb. bxs., 13@14c; buckwheat, 2 lb. bxs., per lb., 11@12c. Extracted and strained, white, 9@10c; dark 7@8c.

BEESWAX—The market continues rather quiet, but the supply is light and prices firmly sustained. Western, pure, 24@24½c.; Southern pure, 25@25½c. D. W. QUINBY, 105 Park Place.

SAN FRANCISCO.

HONEY—Several small lots of new are on the market, but there have been no sales reported beyond those mentioned last week, which were to fill urgent orders. Quotations are entirely nominal, with little prospect of any movement until prices are lower.

We quote white comb, 14@16c.; dark to good, 8@12c. Extracted, choice to extra white, 8@8¼c.; dark and candied, 6½@7c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—In fair demand. Extracted selling at 8@10c.; comb scarce—nominal at 18@22c.

BEESWAX—Prime in demand at 22@23c.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—As there is no honey in market, we have no quotations this week.

A. C. KENDEL, 115 Ontario Street.

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

Special Notice.—This number of the BEE JOURNAL completes the first half of the volume for 1882. A few have only subscribed for six months, and their subscriptions expire with this number. To all such we desire to remark that by sending on their renewal *at once*, they will not only prevent the annoyance to themselves of missing the regular visits of their old friend—the Weekly BEE JOURNAL, but they will save us much trouble in taking their names off from our mailing lists, and then re-entering them within a short time. We hope all will renew at once or else send us a notice by return mail, if they desire its visits continued.

◆

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ The postal law makes the taking of a newspaper and the refusal to pay for the same, theft, and any person guilty of such action is liable to criminal proceedings the same as though he had stolen goods to the amount of the subscription.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ Ashland, Pa., June 3, 1880.—A case of spavin that came under my observation was entirely cured by one bottle of Kendall's Spavin Cure, and the horse sold afterwards for $200.
25tf Yours truly, C. H. BARNARD.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Three years ago St. Julian, the great California trotter, was unknown; the same may be said of Kendall's Spavin Cure. Now both have a world-wide reputation. Why? Because they both have merit. One is a great trotter, the other is the most successful remedy ever discovered to be used on man or beast. 26w4t

◆

CLUBBING LIST.

We supply the Weekly **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both All postage is prepaid by the publishers.

	Publishers' Price.	*Club.*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A. I. Root)	3 00..	2 75
Bee-Keepers' Magazine (A. J. King).	3 00..	2 60
Bee-Keepers' Instructor (W. Thomas)	2 50..	2 35
The 4 above-named papers	4 50..	4 00
Bee-Keepers' Exch'nge (Hook & Peet)	3 00..	2 80
Bee-Keepers' Guide (A. G. Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 7 above-named papers	6 30..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **24c.** per pound, delivered here. Cash on arrival. Shipments solicited.

To avoid mistakes, the name of the shipper should always be on each package.

ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL

GOLDEN ITALIAN QUEENS,
FROM IMPORTED STOCK.

Warranted Queen, $1.00, 6 for $5.00; Tested Queen, $1.50. Address by registered letter or post-office order, F. H. SCATTERGOOD,
26w8t Newgarden, Col. Co., Ohio.

W. Z. HUTCHINSON,
Rogersville, Genesee County, Mich.,

Makes a *specialty* of rearing fine Italian Queens. All queens bred from imported queens, and from the purest and best home-bred queens, and the cells built in full colonies. No black bees in the vicinity. Single queen, $1.00; six queens for $5.00; twelve or more, 75c. each. Tested queens, $2.00 each. Safe arrival by mail guaranteed. Send money by draft, registered letter, or by money order drawn on Flint, Mich. 26smtf

BARNES' PATENT
Foot Power Machinery
CIRCULAR AND
SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

Class in Bee-Keeping.

Application has been made to me to take students in Bee-Keeping. I have, therefore, determined to begin a class on MONDAY, JULY 10, and extend through eight weeks. The instruction will include a study of the Anatomy and Physiology of the Bee, Queen-Rearing, Artificial Increase, Implements, Comb Honey, Extracted Honey, Bee Pasturage, Wintering, etc.

I have a good library of Bee Literature, all Approved Modern Appliances, etc. My home Apiary has eighty colonies of Italian Bees, among which students can practice. O. CLUTE,
24w Iowa City, Iowa.

FLAT-BOTTOM
COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Pure Italian Bees
at reasonable prices.
FULL COLONIES IN LANGSTROTH HIVES,
QUEENS AND NUCLEI.
Satisfaction guaranteed in every sale.
22w8t JOHN F. DIPMAN, Fremont, Ohio.

TIN POINTS for GLASSING HONEY

Cut by machinery; are much cheaper and better than hand-cut, and perfectly straight; 1,000 to 5,000, 25c.; 6,000 to 10,000, 22c.; over 10,000, 20c.; 6c. per 1,000 extra by mail. Samples for 3c. stamp.

W. C. GILLETTE,
15am5t LeRoy, Genesee Co., N. Y.

IN DISTRESS for want of Beeswax. We are now paying 26c. cash, or 28 c. trade, for good yellow wax. Those of our friends who want large lots of foundation from us will have to send us the same amount of wax or wait till we can collect it, as our stock is about exhausted. Until further notice, we will sell thin foundation for sections at 55c. per lb.; heavy foundation for brood combs at 43c. No discount from the above rates.
23w4t G. W. STANLEY & BRO., Wyoming, N. Y.

100 Colonies

FOR SALE. ALSO,

TESTED AND DOLLAR QUEENS

AND

BEES BY THE POUND.

Send address for prices.
1w35t **JAMES HEDDON,** Dowagiac, Mich.

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.
1wly **D. S. GIVEN & C.,** Hoopeston, Ill.

1882-J. S. TADLOCK.-1882

LULING, CALDWELL CO., TEXAS.

Breeder of Pure Italian Queens. I use one of J. H. Nellis' best imported queens. Tested Queen, $2.50; per half-dozen, $13.50. Select Tested, $3; per half-dozen, $16. No "Dollar" or nuclei-queens handled. Safe arrival and satisfaction guaranteed, if possible. 14w39t

1882.-ITALIAN QUEENS.-1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby Smoker for $1.50. Address all orders to
L. J. DIEHL,
(Money Order Office)—Butler, Dekalb Co., Ind.
10wtf

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
13wtf Abronia, Mich.

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

—"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens	$1;	Tested....$2
Cyprian Queens	$1;	Tested....$2
Palestine Queens	$1;	Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified. One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Comb foundation on Dunham machine, 25 lbs. or over, 35c. per lb.; on Root machine, thin, for boxes, 40c. per lb. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Toscola, Ill.** 1wly.

PRIZE QUEENS FOR 1882,

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen	$4.50
2-frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1..	2.50
" " per half doz., after July 1	13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,
1wtf Burlington, Iowa.

BIND YOUR JOURNALS

AND KEEP THEM

NEAT AND CLEAN.

EMERSON'S PAT. BINDER FOR MUSIC & PERIODICALS

The Emerson Binder

IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Bee Journal of 1880	**50c.**
For Bee Journal of 1881	**85c.**
For Bee Journal of 1882	**75c.**

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

4—RACES OF BEES—4

Italian, Cyprian, Holy Land and Hungarian Queens.—Warranted queens, $1.50; extra selected, $1.75; tested, $2. Send for my **21st Annual Circular.**
19wtf **HENRY ALLEY,** Wenham, Mass.

EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book. G. W. FISHER,
Box 238, Rochester, N.Y.

☞ Also for sale at the BEE JOURNAL Office. ☜
2w6m.

65 *ENGRAVINGS.*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

LOOK HERE!

If you want cheap bees and hives to suit, good Cyprian, Albino or Italian Queens, Comb Foundation, all kinds, Section Boxes, and everything a live apiarist needs, send for prices.

Full Colonies and Nuclei a Specialty

with good young Queens. Give me a call, friends, and I will try and please you. (Box 819)
E. T. FLANAGAN, Rose Hill Apiary,
5wly Belleville, St. Clair County, Ill.

A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

925 W. Madison Street, Chicago, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers' Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
1wly Hamilton, Hancock Co. Ill.

We now quote an

Advance of 5 Cents per pound

on the PRICES PRINTED IN OUR CIRCULARS, wholesale or retail. 15wtf

INQUIRIES

CONCERNING

THE CLIMATE,

Mines, Manufactories and Commerce

OF

COLORADO,

will be promptly and truthfully answered by private letter, upon sending One Dollar to the

Woman's Industrial Association,
15w6mp 291 Sixteenth St., **DENVER, COL.**

Advance in Foundation.

The manufacturers of Comb Foundation have advanced the price 5 cents per pound, owing to the increased cost of Beeswax.

From this date, and until further notice, the price of all the styles and kinds of Foundation, except the VanDeusen (flat bottom), will be

Advanced 5 Cents per pound,

from the advertised price in my Catalogue.

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL

QUEENS--QUEENS

Circulars free. Address,
15w6m **JOS. M. BROOKS**, Columbus, Ind.

FOR SALE,

One of the Largest Manufactories

OF

Apiarian Supplies in the World.

35 Hands now Employed.

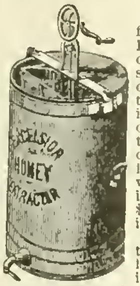
Here is an opportunity for one or two bee-keepers to obtain a good business. My reason for selling is that I am disabled. For information address "S," care of the Bee Journal, Chicago, Ill., who will forward the correspondence to me. 23wtf

Excelsior Dunham and Vandervort *FOUNDATION.*

Owing to the large advance in the price of wax, I now quote prices thus: Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

J. V. CALDWELL,
3wly Cambridge, Henry Co., Ill.

EXCELSIOR HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13	inches	....	$8 00
For 2 Langstroth "	10x18	"	....	8 00
For 3 " "	10x18	"	....	10 00
For 4 " "	10x18	"	....	14 00
For 2 frames of any size,	13x20	"	....	12 00
For 3 " "	12½x20	"	....	12 00
For 4 " "	13x20	"	....	16 00

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

FREE! FREE!

Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.
11wtf E. A. THOMAS & CO., Coleraine, Mass.

Florida Land--640 Acres

CHEAP FOR CASH.

DESCRIPTION,—Sec. 4, township 7, south range 7 west, Franklin county, Florida, situated about 50 miles south of the Georgia line, 25 miles west of the city of Tallahasse, the capital of the State, and about 25 miles northeast of the city of Apalachicola, a seaport on the Gulf of Mexico, and within 2 sections (5 and 6) of the Apalachicola river; the soil is a rich, sandy loam, covered with timber.

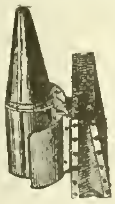
It was conveyed on Dec. 31st, 1875, by Col. Alexander McDonald, who owned 6 sections, including the above, to J. M. Murphy, for $3,200, and on Sept. 5th, 1877, by him conveyed to the undersigned for $3,000. The title is perfect, and it is unincumbered, as shown by an abstract from the Records of the county, duly attested by the County Clerk; the taxes are all paid and the receipts are in my possession.

I will sell the above at a bargain for cash, or trade for a small farm, or other desirable property. An offer for it is respectfully solicited. Address,

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

DUNHAM COMB FOUNDATION—40c. per pound; extra thin and bright, 10 sq. ft. to the lb. 48c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13w1y

BINGHAM SMOKERS.



I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including the CONQUEROR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited and published by
C. N. ABBOTT, Bee-Master,
School of Apiculture, Fairlawn, Southall, London.

☞ We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 per annum.

The Bee-Keeper's Guide;

OR,

MANUAL OF THE APIARY,

By A. J. COOK,

Of Lansing, Professor of Entomology in the

State Agricultural College of Michigan.

—:o:—

320 Pages; 133 Fine Illustrations.

—:o:—

This is a new edition of Prof. Cook's Manual of the Apiary, enlarged and elegantly illustrated. The first edition of 3,000 copies was exhausted in about 18 months—a sale unprecedented in the annals of bee-culture. This new work has been produced with great care, patient study and persistent research. It comprises a full delineation of the anatomy and physiology of the honey bee, illustrated with many costly wood engravings—the products of the Honey Bee; the races of bees; full desccriptions of honey-producing plants, trees, shrubs, etc., splendidly illustrated—and last, though not least, detailed instructions for the various manipulations necessary in the apiary.

This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

—:o:—

Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—*L'Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—*British Bee Journal.*

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYNKOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—A. E. WENZEL.

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It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Bulletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

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This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

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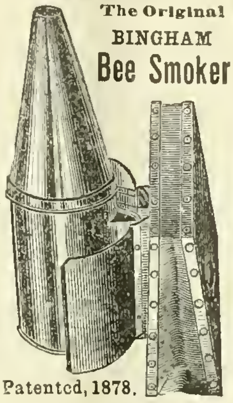

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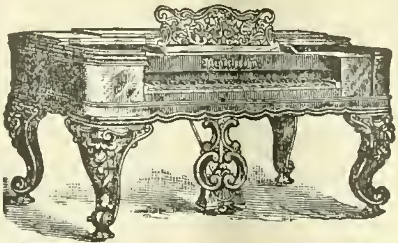

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items 417, 418
An Important Hint 417
Our Method.................... 417
Bees and Honey.................... 417
Illinois Industrial University.................... 417
Foreign and Domestic Crop Prospects 418
"Almost Persuaded".................... 418
The Cultivation of Honey Locust.......... 418
Bees from Syria and Cyprus.................... 419

Among Our Exchanges—

Clipping Queen's Wing.................... 421
Title to Fugitive Swarms.................... 421
Absconding Swarms 421
Antirrhinums and Bees 422
Bee-Keeping in Maine 422
Honey and Bee Shows in Wales.............. 422
Practical Suggestions on Bee-Culture..... 422
Cook's Manual 422
Marketing Honey.................... 422

Correspondence—

Tree Planting, Cyprian Bees, etc........... 423
How to Transfer Bees.................... 423
A Friendly Chat with L. W. Vankirk 424
Importance of Having a Good Queen..... 424
D. A. Jones' Method of Transferring...... 425
Wintering in Chaff Hives 426
How to Introduce a New Queen............ 426

Selections from Our Letter Box—

After-Swarming 426
Lamp Moth Trap.................... 426
Storms in Kentucky 426
Ready for Linden Bloom.................... 427
Bees have Prospered.................... 427
Improvement in Disposition.................... 427
Motherwort for Bees.................... 427
Wired Foundation.................... 427
A Sad Accident.................... 427
A Valuable Seedling.................... 427
Late Feeding.................... 427
More than Doing Well.................... 427

An Important Hint.—The Chicago *Times*, in an extended notice of a recent publication entitled "Food Frauds," speaks as follows of "glucose mixed with a little of the honey produced by the bees: Its test is one of difficulty and the best way is to beware of the neat glass jar bearing the trade-mark of a New York or Chicago dealer, and to buy the tin pails or common fruit-cans with the name of the producer on the vessel." We have time-and-again advised bee-keepers to label their honey packages with an attractive label, giving their name and address, and also simple directions for liquefying the honey when it becomes granulated. It is an important matter, and in the near future the name of the producer will sell the honey when no assurance of the dealer could do so.

* * *

Our Method.—The clipping of the queen's wing having become a matter of acknowledged good policy, as we knew it would, the question naturally arises, What is the best method for clipping it? We have tried all plans, and find the quickest, easiest, and the least risk attending the following: Lift from the hive the comb on which you find the queen. slant it toward the hive with the lower end resting on the ground and the upper end against the hive, make no rapid motions to alarm the queen, but deliberately wait till she is in a position that you can grasp the end of one wing between the thumb and fore-finger of the left hand, then with a sharp pocket-knife and an up and backward motion cut off about one-third of the wing. If deliberate in your movements, the queen will not become nervous, nor will she be aware she has been meddled with, no scent of the fingers will be left on either her wings or body, and no commotion created in the hive.

* * *

Bees and Honey.—We feel highly gratified at the general favor our new book, entitled "Bees and Honey," is meeting. The following, from S. A. Knapp, LL.D., Dean of the Iowa Agricultural College, is one among many of similar import: "Your very excellent work on bees and honey is at hand. I have examined it with some care, and find it an exceedingly valuable contribution to the science of bee-keeping."

* * *

Illinois Industrial University.—We have received the elaborate and neatly printed Catalogue and Circular of the Illinois Industrial University, for 1881-82. This University was established under the auspices of the United States, the State of Illinois, and Champaign County, and ranks among the best in the country, with a full and able Faculty, and its corps of lecturers and instructors cannot be excelled. The number matriculating as students since its opening is 1,698. T. J. Burrill, M. A., Ph. D., is Professor of Botany and Horticulture, and Vice President. Our readers have formed a pleasant acquaintance with him through his instructive answers to botanical queries in the BEE JOURNAL.

* * *

☞ We are in receipt of the Annual Catalogue of Columbia Veterinary College and School of Comparative Medicine, New York City. The Faculty embraces a list of twenty-three learned professors and lecturers, some of whom are scientists of national reputation.

Foreign and Domestic Crop Prospects.

Reports of a most encouraging character come from all sections of the United States. Wheat, although a trifle less in acreage, is far above the average in quality and yield, and corn, oats, potatoes, etc., never promised better. A dispatch from Sedgwick county, Kans., dated June 26, says: "Two-thirds of the 100,000 acres of wheat in this county has been cut and is now in shock. The average yield will be unprecedently large, and of the finest quality. Farmers declare they never saw such fine grain. Many fields will yield *thirty to forty bushels to the acre.* The acreage of corn, nearly 130,000 acres, is growing rapidly and is very promising. Such other crops as potatoes, oats and barley all promise more than the ordinary yield." And not only is this true of most of the grain-producing districts, but in the river valleys, where floods and overflows prevailed so disastrously earlier in the season, a most bountiful yield of cotton, corn, etc., is probable. As we stated last week, there is now every prospect of a fully satisfactory honey yield from nearly all portions of our country. Despite the unusually late frosts, fruit will not be such an utter failure as many predicted. It is really too bad that the "croakers"—the human ogres who are always harping of hard times and ruin to come—those who are not content with feeling gloomy themselves, but must persuade others to view only the darkest side of everything—should be disappointed in their predictions. We have for several weeks counseled our readers to look on the brighter side; that the gloom was only the precursor of better things coming, and we know all will join in rejoicing over the fruition of our hopes. With the comparatively few disappointed ones we sincerely sympathize, as well as with those who have been ruined in the tornado's path. It will be a melancholy satisfaction to them that they are exceptions.

Mr. A. Pettigrew, in the London, Eng., *Journal of Horticulture*, of June 15, gives the following gloomy picture of bee-keeping there this season:

> If all the districts of England are as unfavorable for bees at present as that of Cheshire, feeding—vigorous feeding—should be considered the most important duty of the apiarist. Hives are very full of bees, and large hives well filled with bees require much food—at least a winebottle full of syrup each every day. Indeed, that is hardly enough to keep a hive containing forty thousand bees in health and prosperity if no field pickings are obtained. The season here has been so unfavorable that drones have been killed as soon as born in hives not vigorously fed. All young bee-keepers should know that colonies on the point of swarming require a great amount of food, and that if the pinch of starvation is felt the bees are much discouraged, lose their balance, and for the time being abandon the idea of swarming.

It is also reported from England that their crop prospects are of a gloomy nature. There has been neither sun nor warmth, and in many districts torrents of rain have fallen. It seems likely, therefore, that the demand from England this year, for American food supplies, will be very great. The outlook everywhere for American farmers and bee-keepers is very good, both as regards yield and prices, and continued prosperity is almost guaranteed.

"Almost Persuaded."—We devote much space this week to the discussion of Mr. Blow's interesting paper, "A Bee-Keeper's Experience in the East," read before the British Bee-Keepers' Association, on May 10th. Mr. Cowan, it will be observed, was very grateful to Mr. Blow, for his pluck in going to Cyprus, to divide with America (for the credit of England and English bee-keepers) the honor of having seen Cyprian bees in their native haunts, and studying their habits and disposition at home, and to satisfy Mr. Cowan that there was really an American in the Island of Cyprus in charge of and successfully manipulating a Cyprian apiary. While Americans will go down in sackcloth and ashes because the gentleman "does not think it is right for them to have everything their own way," the world will rejoice that Mr. Cowan is at last "almost persuaded" that all of Messrs. Jones' and Benton's letters about their Cyprian apiary is not mere bombast; and what a consolation it will be to those gentlemen that he at last is convinced! *Gloria in excelsis.* We are, however, pleased to observe that Mr Blow neither assumed that it required much pluck nor great self-sacrifice, to visit Cyprus after Mr. Benton had been a two years' resident there, and had surmounted all the obstacles, so that a quiet study of the Cyprian and Syrian bees, in Americanized frame hives, was a comparative pastime and luxury.

The Cultivation of Honey Locust.

The *Nebraska Farmer* gives the following valuable instructions regarding the planting and treatment of honey locust for hedges:

> The secret in hedge-growing of any kind, is well directed care and attention during the first three or four years, and if this be given to honey locust it will make a hedge every time. The plants must be good ones, vigorous and thrifty—and should be about the same size together, and not plant small and large ones promiscuously. Before setting, make the ground along the line rich and mellow. After setting out the row must be cultivated and kept clean until the hedge is matured or finished. Let the plants grow the first year undisturbed, and then cut them down within three inches of the ground; the second year, seven inches from the ground; third year, twelve inches; fourth year, twenty-five inches; sixth year, thirty-three inches; and the seventh year, height desired for fence. This takes seven years, but the fence is good after the fourth year.

In view of the increasing destruction of our forests, and the great cost of fencing material, any substitute for good fences will be eagerly sought after by the thoughtful farmer. Osage orange has been extensively tried and experimented with, but it fails to fill the bill, there being many very objectionable features about it, chief among which are its inability to stand excessive cold winters; but the honey locust is free from this objection. As an attractive hedging nothing can excel it in appearance, and certainly nothing is easier of cultivation. When allowed to grow in tree form it becomes a beautiful shade tree, and the timber is among the most valuable. For honey-producing it stands among the best, and bee-keepers will do well to alternate the honey locust with linden and tulip tree or poplar, as it comes into bloom before the linden, and is a more certain producer, though not so bountiful. Bee-keepers should liberally ornament their grounds with it, and try its virtues for hedging.

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Bees from Syria and Cyprus.

The following is the discussion on this subject at the British Bee-Keepers' Association, after the reading of the paper by Mr. T. B. Blow, entitled "A bee-keeper's experience in the East," which will be found on page 327, and is taken from the *British Bee Journal* for June.

In answer to a member Mr. Blow said that he attributed the smallness of the Cyprian bees to their breeding in old combs continually. He thought the bees would develop by the culture of this country, from the fact that the queens were not small. Some of the queens that he sent out were small owing to long confinement in their hives. The Cyprian and Syrian queens are not quite so large as our English queens. The people in Cyprus do not remove the old comb for years, simply removing the back combs only.

The Rev. T. Sissons said he thought Cyprians were the handsomest bees we had in the world. They were not only remarkably handsome but cheerful. Their notions of *meum* and *tuum* were rather peculiar. They seemed to have proper notions of *meum;* they defend *meum* with remarkable courage. He was afraid they were not bees for a clergyman to keep, as their notions of *tuum* were exceedingly vague. They were thoroughly demoralized; they went out, got all they could, and gave up nothing. He had been working with them for about two years, and he found no increase of size. The queens were about the same size; and the workers did not increase. Nor did he think, judging by their appearance, were they likely to increase. They appeared to be quite different from the Ligurians. But he found them excellent workers, working early and late, and in all weathers; they propolized with wax. With regard to their tempers he was bound to say that you must understand them if you are to manage them. They were like some people whom he knew, who, provided they are well managed, were the best of friends; but if you tread on their favorite corn they are awkward to deal with. These Cyprian bees must be approached in a peculiar way. In the first place, smoke does not appear to affect them; in fact he had given up the attempt to approach them with smoke; the law of strong attachment to *meum* came out there. If, instead of using smoke, you sprinkle a little water and sugar, that diverted their attention. He found that they were more troublesome toward the end of the year than at the commencement; they seemed to be specially indignant then to any one taking away the property which they had accumulated; he rather admired them for it. He thought that the Cyprian bee was well worthy of culture in this country. During the present summer he intended to go in for more of the Cyprian bees.

In answer to a member Mr. Blow said the cylinders were packed in large stacks, and the spaces in front between the cylinders were cemented with mud; a small hole was pierced at the bottom of each cylinder, and through this hole the bees entered. They had no alighting-board. There was a great difference between the Syrian and Holy Land bee,—a much greater difference than between Syrian and Cyprian themselves. The latter were, in his opinion, almost identical, and really did not deserve to be treated as a distinct variety. But there was a marked difference between the Holy Land bees and the Cyprian, the Holy Land bee being differently shaded, and very much more downy. There was a great difference between the Cyprians, the Syrians, and the Ligurians; the Ligurians were much more robust than the two former. With regard to the increase in size, he thought that a couple or three years' experience was not sufficient. A decrease in size has probably been going on for many generations—he supposed for a thousand years; although we give them better combs we could not expect them to increase at once. In transferring his hives he had to use a hammer and chisel to break up the clay cylinders, therefore they could imagine the bees getting slightly irritated. He found it was useless to smoke them; but when he used one of those vaporizers, and well sprayed every bee in the hive, then he rarely got a sting. The Cyprian and Syrian queens were much more lively than the English queens. In the first twenty or thirty colonies that he transferred the operation took place in the open air, he found the queens were not always in the hive, though they had evidently been there very recently; he was certain they took flight, because he caught the queen in one case as she was flying. After that he removed them into a room and transferred them there.

The Rev. T. Sissons said the Cyprian bees were more sociable if they were put in company with some other hives. Where a hive was allowed to stand alone the bees were much more wild than those which were found in company with others. They are something like ourselves in this respect—in society we were more amiable than men who dwelt in the woods.

Mr. Blow said that from the little he saw of the bees in Cyprus he thought there was no doubt they were much larger than our English bees, and much stronger on the wing. There was, too, a marvelous amount of honey in their hives. The way they flew out in the morning and came in loaded quite impressed one with their superiority. There was no doubt that the queens were far more prolific.

Mr. Cheshire, being called upon for a few remarks on the subject, said that he was afraid his experience would not help any one. The first Cyprian queen that came into his possession was in a diseased or injured condition; it had been originally the property of Mr. Jackson. Mr. Jackson told him that Cyprian bees did not hold to their combs so strongly as others. Certainly he found that statement perfectly true with regard to the queen; she was blown off the comb—while he had one of the combs out of the hive—no fewer than four times. Besides, she was found outside the hive four times. With regard to the remark about the size, his experience lay in an opposite direction as to the queen; this queen never weighed more than the average English one. Mr. Benton sent him a Cyprian queen, and she did not weigh more than the average English worker, being small in the abdomen her bees were small. With regard to the size of the bee, he was inclined to think that they were likely to fall into a mistake on that point. There was an idea current that if they increased the size of the bee they were increasing its usefulness or fruitfulness. These two qualities, or ideas, did not necessarily run together. They must bear in mind that the carrying power of an animal was not in proportion to cube or square of its measurements. Supposing they took a horse and increased its size, so that it stood ten feet instead of five, they would have a horse which, upon mathematical grounds, would have only half the relative power. All who were acquainted with the laws of construction knew perfectly well that if they increased the hight of a building they must increase the strength of the under parts, or they would not be able to support it. If they increased the size of the bee they did not increase its power proportionately. The bee visited an enormous number of blooms, and if you had a large number of bees of a smaller size you had really a larger number capable of visiting a larger number of blooms, and proportionately more honey gathered than in the case of a large bee gathering relatively a smaller quantity of honey in proportion to its size. He thought it had been shown that the social bees were smaller, and that those bees who lived by themselves were very much bigger. The first Cyprian queen, as he had said, was injured, and one had no ground upon which to form a judgment. The next Cyprian qeeen showed some remarkable peculiarities — she came from the north of the island; the bees she bred were not so bright in color as those bred by the first one. He had had four; they constantly raised queen-cells, and the bees evidently destroyed their own queen. The third queen, which he got from the north of the island of Cyprus, raised bees of a dark color. This last queen sent by Mr. Benton was going on fairly well. She was extremely small, her bees were small though bright. with regard to the tempers, the queen (the third in number that came into his possession) had raised bees that were not generally irritable, but if they were disturbed they were furious beyond expression. On one occasion, when he transferred a swarm from one hive to the other, he was stung at least a hundred times during the operation; they were utterly uncontrollable; yet these bees previously had been easily handled. They read that bees were sometimes in an irritable condition without obvious cause. The third Cyprian queen that he got was sent by Mr. Abbott, who had written to say that she was not a pure Cyprian, though he (the speaker) was absolutely certain it was the same queen, because she was constantly before his eyes; she was the same queen that was brought to the Horticultural Gardens, and Mr. Abbott must have been mistaken in his judgment. He should like to ask Mr. Blow whether he saw in Cyprus any divergence or variety in color in the bees in one hive. Among the Ligurians there was certainly variety; at any rate, there was a great amount of difference between the color of the bees with his own queen. She did not breed evenly colored bees like the majority of Ligurians; they shaded in perceptible gradation, and he was inclined to think that they had not the pure species that some people imagined.

Mr. Walker said that he had read something on the subject of the size of bees, and it was a question that should be sifted out. Mr. Cheshire had said that those who knew mathematics would concur with the remark that they ought to be careful in increasing the size of the bee in order to get additional profit. If they increased the hight of a horse to ten feet they might not get more strength, but if they increased the horse to the same proportions as Jumbo, they would have more strength. He should like to see the subject pursued and thought out.

Mr. Walker, having to fulfil another engagement, vacated the chair, which was thereafter filled by the Rev. E. Bartrum, who proceeded to say that with regard to the greater fecundity of the Syrian queen there was of course a tendency to extol the virtues of all new races. He did not think that they could arrive at any reliable information on the subject until they had tried repeated experiments, such as those Mr. Cowan had conducted, who kept a large number of his reserved queens and bred from queens not more than two years old, and the results were satisfactory. The moment it was found that a queen was not prolific, it was removed. It was only by carefully testing them in that way that they could arrive at any conclusion as to the prolificness or fecundity of the Ligurian or Cyprian bee.

Mr. Blow said with regard to those bees which had been brought from the north of the island of Cyprus, he might say that the bees he got from a village on the mountains at the north of the island were very much darker than any others he saw. He made a remark to Mr. Benton that he had some bees darker than the average of his Cyprian bees, but he (Mr. Blow) thought in all cases they were bred evenly. He did not find any bees that were very yellow with bees that were very dark; they were all dark. It was curious to note that the bees obtained at this village, which was nearly 2,000 feet above the level of the sea, were darker than those which he obtained at another village, which was at a much lower level, being only a few miles from the sea. There was one more point he should have touched upon, that was, that the Cyprian and Syrian bees, especially the Cyprian bees, were much infested with a bee parasite (*Braula cæca*). One or two persons had written to know what was the matter; one remarked that the queen had three bumps on her. Mr. Cowan had said he took twenty-three specimens of the parasite from a queen. With regard to what had been said about *meum* and *tuum*, the Syrian bees were much more courageous in defense of their hives; they did not allow the black bees to alight on the hive, and they fly at them on the alighting board. Anyone alighting there was seized at once, and on all sides the black bees got worsted.

Mr. Cheshire said that the variety or variation in color of which he had spoken seemed to illustrate Mr. Blow's experience. Those bees which came from the north of the island were darker than the bees bred from the queens hailing from further east. That circumstance showed that they should not be too hasty in judging as to what were pure and not pure Cyprian bees.

The Chairman said that he bought some bees in the autumn from a distance of about five miles from his house. He found that they were as black as they could be, yet every bee in his immediate neighborhood had evidently some Ligurian blood. Therefore, if they had perfectly black bees about five miles from his house, surely in Cyprus there would be some diversity of color.

The Rev. T. Sissons said his experience was that the Cyprian queens were small, but what they lacked in size they made up in spirit. There was a man going to prove that all the great things in this earth were done by little men. While the Cyprian bees were small, they were wonderfully vivacious and prolific.

In answer to Mr. Peel (the Secretary), Mr. Blow said that when the queens arrived in England, at first they were a little smaller, but no sooner did they arrive than they began to raise brood. He believed in one or two cases they bred in the hive on the voyage, the bees traveling in the wooden boxes.

Mr. Cheshire having asked a question in reference to the Syrian and English queens depositing their brood in patches in combs, Mr. Blow replied that he thought in the case of the Cyprians and Syrians, the bees removed the pollen. He thought that was one point brought out by their gnawing powers, being able to remove the pollen readily. They found large patches, not a single cell being without brood, while in the case of the English bees they found that pollen was left in some of the cells. He thought, however, in the case of the Cyprians and Syrians, the pollen was removed also.

Mr. Cowan said they were much obliged to Mr. Blow for his excellent paper. It was very plucky of Mr. Blow to go out to Cyprus, and he was glad he had done so for the credit of England and English bee-keepers. He (Mr. Cowan) did not think it was quite right for the Americans to have everything their own way. He had begun rather to doubt the existence of the Cyprian apiary. But he was glad to hear that Mr. Blow had met Mr. Benton, and that he was all right over there. With regard to the size of the Cyprian bees, they would remember some years ago he tried to get a larger breed of bees; and had foundation from America, with four and a half cells to the inch, and the bees certainly got larger; but he did not find that they were better than the ordinary-sized bee, in fact it made good what Mr. Cheshire had stated, that it was not the larger-sized bee which was the most productive. With regard to the Cyprian queens he had a few from Mr. Blow, and his (Mr. Cowan's) experience was rather curious with them. Wishing to test the prolificness of the queens, he took away comb after comb and gave them empty combs, and he found as fast as he put in the combs, they were filled with eggs; they seemed most prolific. He noticed that the bees were much smaller than our English bees. Last week he had a very curious accident to one of the hives. Every comb was well filled with brood, and the queen was laying beautifully. On Friday morning he found the queen dead on the alighting-board. He opened the hive and found queen-cells on almost every frame. That was his experience with Cyprians in raising queen-cells; he could not account at all for the destruction of the queen as she appeared most prolific, but there was no doubt she was destroyed. The queens were very lively, and he found some difficulty in dealing with them; they were small, and run about all over the place, and it was difficult to find them. If you had got them on a frame they would perhaps drop off on to the frames below; so that those who had Cyprian queens he would advise to carefully watch them. He wrote to Mr. Blow asking if he had noticed that the bees were covered with *Braula cæca*. Three out of four queens had them; one of them had twenty-three. He found that the Peet cage, which he had been lately using, was most suitable for the work of introducing. He had himself not had one failure in introducing them. You merely put the queen and a few workers into the cage and place the cage on the comb, not pressing it into the comb, but merely putting it on over some honey. The bees make their way into it in twenty-four hours, liberating the queen themselves. He was sufficiently sanguine as to success, or else he should not have tried them with such valuable queens.

A member having asked how long the work took after the colony was deprived of the old queen, Mr. Cowan said that he deprived the colony of the old queen and examined them next day, and he found in every case the queen was liberated by the next day. There was some candy in the cage, for the queen and bees to eat if they required it; but the bees having to work their way through their comb, he thought, made them take to the queen. He concluded by saying he would have much pleasure in proposing a vote of thanks to Mr. Blow for his most interesting paper, and also for the trouble he had taken to visit Cyprus, and enlighten them on the way to manage the Cyprian bee.

Mr. Jackson seconded the motion, remarking that not only the Association but the whole community were greatly indebted to Mr. Blow for the perseverance and energy he had displayed in bringing a colony of the Cyprian bees to this country.

The motion was unanimously agreed to, the Chairman remarking that they were indebted to the Secretary, Mr. Peel, for introducing such a useful member as Mr. Blow to the Association.

Mr. Blow replied, observing that he had not lost more than twenty per cent. of the colonies on the road home. He had seen Mr. Benton's apiary, and what had been said about it in the American bee papers was quite true; he had a very large apiary there, having a large house and grounds for its management. With regard to queen-cells, Mr. Benton had told him that he frequently saw as many as fifty or sixty queen-cells raised from one colony.

Mr. Peel said one great advantage of the present discussion was that it elicited subjects for future papers, and he should be glad to hear that any of the gentlemen present were going to give a paper next month.

Mr. Stewart proposed a vote of thanks to the two gentlemen who had occupied the chair. Mr. Glennie seconded the motion. He said that Mr. Walker some years ago had made some experiments on himself with a view of ascertaining if it were possible to become inoculated with the sting of a bee; he had allowed himself to be stung a hundred times. He had the same experience as Mr. Walker, that the sting of the bee did not hurt one so much when he has been inoculated.

Mr. Sissons said it would render the shows more attractive if an addition to the prizes were given for the best examples of Cyprian, Ligurian, and black bees. There were some prizes for the handsomest queen in the department. He mentioned that the sting of the Cyprian bee was much more painful than that of the English bee.

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AMONG OUR EXCHANGES.

MISCELLANEOUS.

Clipping Queen's Wing.—The *American Agriculturist* gives the following on this subject:

It has been asserted that it injures the queen to have her wings clipped. This is not true. Structurally, the wing is very simple; it consists of a thin membrane, spread over veins which are firm, and consists of a double tube, one inside the other. The inner tube carries the air, and the outer the blood to nourish the wing. Clipping has been practiced by many of our best apiarists for years, and no one has detected the least harm from it. Ants do the same thing by their queens, and for the same purpose. The advantage of this practice is great. There is no danger of losing a colony. The bees will come forth from the hive, and the queen will, as usual, attempt to follow, but is unable to go with the swarm. The bees will generally cluster, though they may not; and as soon as they find that the queen is missing, will go back to the hive. The queen may get so far from the hive that she cannot return, but this is the loss of the queen, and is far less than the loss of a strong colony. In five cases out of six the queen will return all right.

This practice not only saves bees, but time as well. The hiving of swarms is often a great task, and when they alight, as they sometimes do, at the very top of a tall tree, it is well nigh impossible. This matter becomes still more serious when several colonies come forth at once. They often cluster all together, and the trouble of separation and properly hiving them is great. If the queen's wing is clipped, all of this is saved. One has only to go to the front of the hive, and as the queen comes forth, which is usually late in the exit, pick her up and put her in a cage; a tumbler turned over her in the new hive will do. Next remove the old hive a few feet temporarily, and put the new hive containing the queen on the old stand. It is well to fill the new hive with foundation, and to add one frame of brood, in all stages, from the old hive. The bees will soon come to the new hive, and when all have entered, the new hive may be put in the desired place, and the old one returned to its old stand. At nightfall, liberate the queen, and all is done. If it is desired to prevent any further swarming, we have only to examine the old hive, now nearly empty of bees, and destroy all of the queen cells but one, which should always be the largest. In this way hiving takes but a small amount of time and labor.

The best time to clip the queen's wing is when she commences laying. As soon as eggs are seen in the worker cells, which will be about eight days after the queen leaves the cell, we should clip the queen, as then there are few bees, and it is easy to find her. If the wing is clipped before there are eggs, very likely she may not have mated. The queen only mates on the wing.

Until one has had some experience, the clipping better be done in-doors, before a window; if the queen escapes there will be no danger of losing her. She will fly to the window, and is easily caught. Catch the queen by the wings with the right hand, and let her feet rest on the left hand, taking care not to press her abdomen. She will not use her sting. With one of the fingers of the left hand, on which she is now resting, press down on her feet, so as to hold her. Then take a pair of small scissors, held in the now liberated right hand, and carefully cut off about one-third of one of the front wings. As the queen is resting on her feet, there will be little danger of cutting them. For years we have always clipped all of our queens, and have experienced only advantage. We could not think of keeping bees, and not practice this method.

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Title to Fugitive Swarms.—The Philadelphia *Record* gives the following item relating to the capture and ownership of fugitive swarms of bees, which we reprint, as it is a question often brought up by bee-keepers:

Magistrate Krickbaum's knowledge of the law was put to the test one day last week to determine an ownership of a swarm of bees that settled on a tree near the house of Mrs. Flanagan, on Chew street, Germantown. The busy honeymakers were hived by Mrs. Flanagan after a fruitless attempt to find their owner. At this juncture, John Taylor appeared upon the scene, claimed the bees as the property of his father-in-law, and proceeded to take them away bodily. The bees objected to this procedure, and gave Taylor such a warm reception that he beat a hasty retreat. He soon after succeeded in enticing them into a thicket and carried them away. Then Mrs. Flanagan sought legal advice and obtained a warrant for Taylor's arrest on the charge of larceny, the law saying that ownership in swarming bees is vested in the original possessor only so long as he can keep them in sight. The affair was settled by Taylor surrendering the bees.

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Absconding Swarms.—The *California Apiculturist* remarks as follows on this subject:

The great number of absconding swarms in this section of country are remarkable—never has there been so many known before. One man informs us that he has captured 32, another 20, another 13, and many others various numbers. These have been captured mostly by placing hives and boxes out upon the sides of the mountains or in tree tops. One gentleman says that he had a number of hives piled up near his house; his attention was called to a few bees, cleaning out a hive; the next day, about 11 o'clock, a swarm came and took possession of the same hive. He was clearly of the opinion that the bees seen there the day previous were members of the same swarm, and who were in search of a dwelling in which to move, and were cleaning house when first discovered. The same thing was noticed several times with like results.

In Los Angeles, a man who had a number of empty hives sitting around on his premises had 20 or more of them occupied by runaways, who, regardless of the city bee ordinance, took up their abode in the city of the angels, and will undoubtedly contest their right pointedly with the city dads, should they get after them with a writ of ouster. We cannot account for so many, other than apiarists generally are discouraged on account of the unfavorable outlook and neglect their bees, which they should not do.

Antirrhinums and Bees.—The *Rural Canadian* says:

It is stated recently by naturalists that bumble-bees prefer obtaining honey from Antirrhinums, in preference to any other flowers, in which they have a monopoly over other bees, by a curious provision in the tubes of the corollas. They sit on and cling to the lower lip of the blossom, which bends down by the weight of the bee and makes an opening through which the insect thrusts its head and takes possession of the honey. The honey bee and other insects are not heavy enough to open the entrance. The bumble-bee appears to be aware of this advantage, and flies at once to the Antirrhinums, to the neglect of other flowers which other insects may have previously visited. A writer in the *Garden* says that the old flowers open more easily than young ones, and that while he had found that a weight of twenty grains was required to open the flowers, only three or four grains would bend the lower lip of some older ones.

Bee-Keeping in Maine.—The *Home Farm* remarks as follows:

Why should we not be a honey-producing state? There are thousands of pounds of honey daily going to waste during the honey season for want of bees to gather it; and we are not producing all the honey possible until we have bees enough to visit every honey plant every day, as the day's harvest is lost unless taken in its time. There is no more to-morrow on account of what is left uncollected to-day. The quantity of bees is not the only thing we want, we want every bee to exercise its greatest storing capacity. How are we to arrive at this? Not in the box-hive and the bees left almost without care summer and winter, which is the case, I think, with nine-tenths of the bees within a radius of twenty miles of the writer. We want the improvements that pertain to the business. Who would think of going to farming today with the old wooden plow and other tools of that day—no one. Such things are superseded by other and better implements. So the box hive should be discarded and its place supplied by the best movable frame hive. ....Now rally, all who are interested in bee-culture and let us see if we cannot drive out this fancy, put-up-stuff called honey, with which the market is glutted and which is a shame and disgrace to the name, and fill its place with good, nice, pure honey *not made with hands*.

Honey and Bee Shows in Wales.—Speaking of the late bee and honey show in Cardiff, Wales, the *London Journal of Horticulture* says:

The displays and lectures in the bee tent excited considerable interest, and proved a great feature of attraction in the show ground. Bee-keeping in Wales is in a most primitive state. With few exceptions the residents are entirely ignorant of modern and improved methods. Great superstition prevails, and in many cases visitors to the Exhibition left the bee tent with the impression of the expert possessing some supernatural powers over the bees. Great difficulty was experienced in obtaining bees for lecturing purposes, the owners considering it an omen of ill luck to sell them. One lady asserted that an equivalent to the value of the bees must be given in corn, and another could receive nothing save cheese made in Glamorganshire. These difficulties were, however, overcome by the kindly influence of Mr. A. Pettigrew of the Castle Gardens, Cardiff, himself an advanced bee-keeper, who was most assiduous in his labors to promote the success of the Exhibition. The Cardiff local Committee and the British Bee-Keepers' Association are greatly indebted to Mr. Pettigrew for his kind assistance in promoting the success of this department of the show. Mr. S. J. Baldwin acted as expert. The Rev. H. R. Peel, Mr. T. W. Cowan, and Mr. J. M. Hooker were in attendance during the show to give advice and assistance to the many hundreds of visitors who sought information upon the subject.

Practical Suggestions on Bee-Culture.—Under this heading the Chicago *Herald* gives the following:

There are many people who own a few colonies of bees and seldom, if ever, realize anything from them, while with a little exertion and study they might be made a source of great pleasure and profit. In the first place, no person should ever expect to be successful with bees who is not willing to give the subject a reasonable amount of time and careful study. The most successful bee-keepers are lovers of nature and have a fondness for these little marvels of industry. Those who would be successful with bees must always be ready in the proper season to administer to their wants. Hence the neglectful, heedless and indolent are as sure to fail in apiculture as in any other calling. The inducements to bee-keeping are numerous; it affords a most pleasurable and healthful recreation for a person whose business or profession is confining.

Cook's Manual. — Concerning this excellent Manual of the Apiary of which the ninth thousand has just been issued, the *Home Farm* says:

Having either read in full or examined very carefully all the American bee books that have been published during the past 25 years, and having the most of them in our library, we can say most unhesitatingly that the best book on the subject of practical bee-keeping is that by Prof. A. J. Cook, of the Michigan Agricultural College, and known as the "Manual of the Apiary." The work has been revised, enlarged and mostly rewritten to adapt it to the results of the latest scientific investigations, and the best practical deductions upon the intricate and fascinating pursuit of bee-keeping. For a single book upon the subject we do not know of one so practical, so helpful, so plainly written as this.

Marketing Honey. — The *Michigan Farmer* gives the following advice on marketing honey:

The first requisite of success is to have your honey and your package clean and in good order. The label must not be soiled. Take a sample with you and solicit orders. Let your sample be a fair specimen of what you have. Visit the grocers on the day, and at the hour that they are least likely to be busy, so that they can afford to listen to you patiently. Let your price be reasonable, though sufficient to cover your expense, and pay for your trouble.

☞ We have received a handsome little volume entitled "The Inter Ocean Curiosity Shop." It is compiled from numerous queries and answers published in the *Inter Ocean* during the past year. It touches upon nearly all of the popular subjects of the day. Religious, Scientific, Historical, etc., and displays deep research and an almost boundless acquisition of knowledge upon the part of the author, Mr. T. D. McMillan. We consider it a valuable addition to our library, and it should be upon the table of every thinking man in the country.

A Sample Copy of the Weekly Bee Journal will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

CORRESPONDENCE

For the American Bee Journal.

Tree Planting, Cyprian Bees, Etc.

HON. L. WALLBRIDGE.

I was much pleased in reading the article upon Cyprian bees, in the BEE JOURNAL of June 21st. I obtained a Cyprian queen from D. A. Jones' first importation. The strictures in that article, though fuller than my observation, are very striking, and correspond with my own experience. The energy of the Cyprians is certainly superior to that of the Italians, and their propensity to sting is only one of the evidences of it; they are more prolific—this gives the advantage of strong colonies early. They defend their stores (*i. e.*, sting) with the same earnestness with which they gather; besides, the propensity to sting is very much over-stated. Even other bees are not equally docile at all times. The same is the case with the Cyprians. I have drones from a Cyprian queen mated with an Italian drone, that show the full dark color of the Italian sire, and other drones from the same queen showing the light color of the Cyprian—the difference very marked. I have frequently tried to get early queens by carrying over drones from a drone-laying queen (not fertilized), but never could get a queen fertilized until the drones appeared from fertilized mothers. I fear the Dzierzon theory is a fallacy. The two facts above seem to prove it. The following article I contributed to one of our papers, and send it to the BEE JOURNAL, as bearing upon the subject of tree planting for honey:

Almost every one does, or ought to, set out some trees every year. The fall of the year is generally recommended as the best time; it may be, however, well done in the spring. As this communication is intended for bee-keepers, it is well to consider what kind of trees to plant.

Basswood is certainly king, coming into blossom generally just as white clover goes out; it fills an important place in the bee-keeper's profits. If the bee-keeper fails to do well when the basswood is in bloom, he may count upon a poor return for that year. The linden and lime are other names in England for another variety of the same tree. Its honey-producing quality is its great recommendation to the bee-keeper—but to others it has advantages. For beauty, there is no tree that has so large and deep colored a leaf, and when it attains its growth it is valuable for timber. It is used for door-panelling and in many parts of carriages and sleighs, and its timber always commands a good price. It is thus useful during its growth, and at its maturity brings a nice sum of money for the purposes indicated. Compare it with the maple tree, so generally planted—what is that worth, either during its growth or at maturity, except for firewood? The basswood has a luxuriant Southern foliage, and for beauty at least is equal to the maple.

Another tree of great value to the bee-keeper is the honey locust. This tree comes in bloom quite early, and is valuable on this account. The bees visit it almost in swarms, and the honey and pollen then brought in gets up the excitement in the hive, and breeding goes on at a rapid pace. Now this is the very thing bee-keepers want. They want strong colonies ready to gather honey when white clover comes in, and I know of no tree or plant which does so much to strengthen the colony early as this locust tree. Have your colony strong early; this is the secret of bee-keeping. Almost any colony will become strong in the white clover season; but then the clover honey is used up in breeding, and you don't get it as surplus. If you have no locust trees in your neighborhood, you should feed your bees, or abrade combs filled with honey already in the hive, changing combs to the center of the brood nest, thus spreading the brood nest and giving the queen an opportunity of laying, which she will be sure to do if you give her a fair chance.

Mr. W. C. Wells, of Phillipston, the largest bee-keeper in this part of the country, attributes the good success of city bee-keepers to the locust trees, as, by the good start from them, we get early brood, and are thus ready with strong colonies for the clover and basswood bloom. Besides the timber of the locust tree is very valuable; it is exceedingly heavy; a cubic foot of it weighs about 100 pounds, and is called mountain ebony. It is valuable for wagon hubs, cogs for mill wheels, and other things requiring great strength; if used for gate posts it is exceedingly durable. Messrs. George Leslie & Son, of Leslieville, Ont., furnish, amongst other valuable trees, the locust tree, of different varieties. They are all valuable, both for honey and timber. It certainly is the wiser to plant a tree which, on attaining maturity, is valuable as timber, than to plant one which, in the end, is not even valuable as a fence post, and only valuable as firewood.

I am indebted to the *Canadian Horticulturist* for valuable suggestions on tree planting. The article appears in the February number, and is by Mr. N. Robertson, Government Grounds, Ottawa. It is too long to copy into this communication, but a few points may not be amiss. "Take the trees up so as to destroy as few of the roots as possible; cut the tops into what is called pole, eight or ten feet long, have a good root, a stem without blemish, and thus a rapid growing tree. Do not take a scraggy, stunted tree; and do not mind having the tree to stand as it did before removed, but plant the side having most roots on the side where the wind will be strongest. Let the hole in which you plant be much larger than the roots, and draw the roots out to their full length. Before you put in the soil, do not let the roots get dry, but give them a heavy mulch of sawdust, manure or straw. This can be kept in place by a few spadesfull of earth, and place the mulch over that a foot beyond the hole where the roots are."

Belleville, Ont.

Rural New Yorker.

How to Transfer Bees.

W. Z. HUTCHINSON.

To transfer bees from box hives into those having movable frames, at the right time and in a proper manner, is an easy task; but to the novice it seems like quite a job. Unless one is very careful, he should transfer bees only when they are getting plenty of honey. When apple trees are in blossom is usually the best time. Clean all the rubbish and grass away from the old hive, spread a lot of sawdust around it, and do not leave a crack or crevice anywhere that the bees can crawl into. One will need a hammer, a saw, a chisel, a case knife, a goose quill with which to brush the bees off the combs, a smoker, some water and a cloth with which to keep all the honey washed up clean. If possible, it is better to have some one to help. Before commencing operations, one must be sure and get every thing that he will need. Commence about ten o'clock some pleasant day, when most of the bees will be in the field out of the way. Blow a little smoke into the entrance, wait a few minutes for the bees to fill themselves with honey, then move the hive back a few feet, and turn it bottom side up. Drive the bees down among the combs with smoke. From beginning to end, keep the bees in subjection. Notice which way the combs run, and take off first the side of the hive with which the combs are the nearest parallel. Cut the combs from the side of the hive by running the hand saw down. Saw off the cross sticks close to the side of the hive. Pry off one side of the hive, cutting the nails if necessary. The next thing is, how to get those crooked, and uneven combs out and get them into the frames. Cut out the first comb, lay it on a board, lay a frame over it; make a mark on the comb around the inside of the frame; cut the comb a little larger than the inside of the frame; spring the frame over it, and one comb is transferred. Sometimes the combs need fastening in, and there are different ways of doing it. One way is to make holes through the frame with an awl, then push thorns or sticks through these holes into the combs. Some use strings, and tie the combs in; others use little strips of wood that reach clear across the frame of combs, and are tied at the ends with strings or wires.

As fast as the frames are filled, hang them in the new hive, which should be placed on the old stand. Keep cutting out the combs and fastening them into the frames until they are all out, shaking the bees in front of the new hive. Some of the frames may have to be filled with small pieces of comb, but in a day or two the bees will have them all fastened together, when the strings or strips of wood may be removed. In putting the combs into the new hive, the brood should be kept as near together as possible. If one attempts to transfer when honey is scarce and robbers trouble, he may have to do it in some building. Some bee-keepers drive the bees into a box before transferring; but a good smart hand would have a swarm transferred by the time that it could be thus driven out.

Genesee County, Mich.

For the American Bee Journal.

A Friendly Chat with L. W. Vankirk.

G. M. DOOLITTLE.

As some seem to think that all Doolittle is after is to make a "big report," and as L. W. Vankirk has been the one to speak out what others have privately said, I wish to have a friendly chat with him, and thus explain some things which seem to some to be a mystery or contradiction. All cannot be said in one article in regard to any system of management, that could be said of it, no more than one chapter of the Bible could tell us of God's plan of salvation for man, and the reason I mistrust why a few of the multitude do not believe the Bible is because their mind dwells on a few dark parts, rather than take in the whole character of the Scriptures. Thus some of my friends have taken hold of certain parts of my writings and forgotten others which harmonize the mysteries. For instance, I have written "get the hive literally full of brood so that when you put on the boxes the bees must store the honey in the boxes if anywhere, as they will have nowhere else to place it. I have also written that after the sections were placed upon the hive, to let the hive alone as far as possible, unless you were obliged to open it to cut queen cells, replace a queen, or some such work of necessity. If I have ever written that the queen keeps the brood chamber literally full of brood at all times, it was not what I intended to write, for they do not. To get this brood chamber full of brood previous to the honey harvest has been a tax upon the queen, and as the honey harvest commences, and we stop exchanging the brood combs in the hive, the queen takes a partial rest, thus allowing the bees to fill the outside combs with honey, as well as a portion of the top part of each frame as the bees hatch therefrom, hence when the honey harvest closes, we have an average of about 25 lbs. of honey to the colony, which is ample to carry an ordinary colony from one honey season over to another.

It will be seen the point I have aimed at making in all my writings on this subject of brood-rearing, has been that a hive full of bees and brood at the commencement of the honey harvest tended toward success, while a hive full of honey or empty comb, with but few bees and little brood, tended toward disappointment. What would you think of a man who had a field of potatoes to hoe, that required the help of 100 men, who only hired two of them during hoeing time, and then near the harvest employed the 100? You would say too late, and the labor of the 100 men thrown away. Just so with bees which came too late for the harvest of honey. Again, why I use a small hive and desire the combs filled with brood before the honey harvest, is that the bees enter the boxes sooner and more readily. If we use a large hive that the queen cannot keep filled with brood, the first thing that the bees do is to fill all combs not occupied with brood with honey, before they make a start in the boxes, after which the tendency is to crowd the queen down. The more sealed honey there is between the brood and the boxes, the more loth the bees are to enter the boxes, and hence the large hive tends toward a small amount of surplus box honey. "Enough is as good as a feast," and 25 lbs. of honey in the hive the first of October, is just as good for the bees to winter upon as 50 lbs. Hence it will be seen that the 25 lbs. extra is a positive damage, to say nothing of its selling value if placed in the sections, as it would be were a small brood chamber used.

Again, I have told you how I unite bees in the spring to make them strong, and if I had not told you in another article that ¾ of my bees were good enough to need no uniting, the position that I "mix up thoroughly so as to give all an even start," would be well taken. But I have told you that all that were able to get in trim for the harvest alone were built up in and of themselves. How they are built up I have told you in the articles, "Production of Comb Honey." Once more, I have told you that I fed no sugar except in the spring of 1878, when I fed two barrels to keep my bees from starving. On the other hand, I have told you how in the fall of 1876 I united my bees down nearly one-third, so as to obtain honey enough for the rest to winter upon (thereby making the bees self-supporting), and thus given you a clue to where I got those combs of sealed honey. I always unite bees in the fall till all are in good shape for wintering, if they are not already so. I have said that after I had done all in my power to get my bees in good shape for wintering, I could not tell why they died, and I say the same thing to-day; but I am not willing to admit that my loss in winter balances my income from the bees, for bees have paid me a good income notwithstanding my losses during winter. I rejoice over the success of those who winter their bees every time, yet I am more proud of the man who can, with the bees he has left, double the income of my successful wintering friend, even if he does lose bees during bad winters.

Mr. Geo. T. Wheeler, who first introduced section boxes in a practical form, once said to me. "I can make 500 per cent. on bees during the summer, even if I have to buy bees every spring on account of loss in winter, while those of whom I buy do not make 250 per cent. on their investment, total receipts all counted." Now, about reporting: In my younger days in apiculture, I favored the adoption of the plans of those who backed up what they advocated by good reports each year, and as I was writing my management of an apiary, I thought no harm would arise from letting the readers know how I succeeded. If Mr. Heddon and others whom we have learned to respect through their writings, would report their crop of honey each fall it would please more than the writer of this article I am sure.

In conclusion, I wish to say that I am very thankful to Mr. Newman and Dr. Tinker, for so ably defending me when I was sick, and placing me where this reply was unnecessary till I had the time to give it.

Borodino, N. Y.

Eichstaedter Bienenzeitung.

Importance of Having a Good Queen.

REV. DR. DZIERZON.

In every season the queen must be accompanied by worker bees sufficient to produce and retain an increased temperature in the hive. As the queen is not designed to build the breeding cells, or furnish the brood with food, the workers attend to that for her. She is rightly called the "mother of bees" because she gives life to all the young bees that exist in the colony, by producing the eggs which develop into the future workers and drones. The success of the colony and its perpetuation depends upon the fruitfulness of the queen. If a weak colony be given a prolific queen, it will quickly increase to a strong one and the strongest colony will soon be reduced to weakness, if the queen produce few or no eggs, either on account of advanced age or other defect. Being aware of these facts the apiarist should tenderly care for his queens, and especially to winter only such colonies as have very fruitful, faultless, and not too old queens. Many queens are nearly useless, even when young, and others still prolific in old age, but the latter are very liable to lose their strength and fruitfulness at a very inconvenient time, when they should be depositing the most brood and when substitution is very uncertain on account of the scarcity of drones. In consideration of this it is very advisable to supersede a queen in about the third summer; and the most favorable time is when the bees are swarming.

The first part of this operation will be the most difficult, especially if the colony is very numerous or has gathered much honey. One method which has been recommended is to allow the colony from which you wish to remove the queen to become quiet, then quickly remove her, place the young queen in the hive and the superseding is over—before the colony fairly realizes her presence. But there is no surety of success in this method, for the bees are often so attached to the old queen, that they will not brook substitution and immediately destroy the intruder.

There are so very many plans given for catching the queen that the operation has become so simplified that it can easily be accomplished in the strongest colony. It is not necessary to look all over the combs and in every corner of the hive to find the queen, but you can easily locate her upon a comb, in any part of the hive. This is not done by inserting combs of honey—for the queen never takes honey from the cells but is fed by the bees—but by giving her an opportunity to deposit eggs without disturbance, especially drone eggs, which occupation best pleases her majesty. For this purpose choose empty brood-combs, or such as are only partially filled, for the queen will be in haste to occupy all space and fill the cells with eggs in order to close the brood. If you will examine that hive in 24 hours, without creating disturbance, you will, in nearly every instance, find the queen on this comb.

To get a queen out of a box hive, about the only way is to drum the bees out and allow the queen to pass out with them. There will be no difficulty in discovering an Italian queen from her golden color, for she excels the worker bees in brightness. The astronomer does not have to search the heavens when seeking Venus, Jupiter, or Mars, for they so far surpass the surrounding planets in brilliancy that they catch the eye at a glance. No more does the bee-keeper seek in vain his Italian queen, and in queen rearing this is quite an object. After the queen is captured and the colony becomes fully aware of its loss, the bees will build queen cells and rear a successor. We may also expect some "after swarms;" the first one will probably appear in about fourteen days, the time being varied by the strength of the colony.

But to those bee-keepers who are not seeking an increase of colonies but rather depend upon the honey harvest for their profits, the method we have given would be of no value. Such bee-keepers must immediately place a young queen in the colony from which the queen has been removed, in order to prevent after swarming and cause as little disturbance among the honey gatherers as possible. The new queen must be caged at least 24 hours, when introduced; some prefer placing a queen cell in the hive that is nearly developed, but this requires skill and patience. I have recently tried—and with much better success—hanging the entire comb containing the queen-cell in the hive which contains no queen. Queen cells are not scarce in the swarming season; every colony which has produced an early swarm will contain several queen cells which must be used at just the proper time, that is, when 9 or 10 days old, for if delayed longer, some may have fully matured, and if the bees are not inclined to swarm these new queens may destroy those remaining undeveloped, by biting through the cells. The bees usually place the queen cells upon one or two combs; attention is necessary to distribute them sufficiently, that every queenless colony may be supplied with comb containing one or more queen cells. This method of superseding queens is certainly very simple and practical, as well as expeditious. Very little disturbance is created among the bees, and scarcely any interruption of labor. The young queen will soon become fertilized and commence depositing eggs. Should she by any means be lost or destroyed during the wedding flight, a new queen cell should be immediately inserted, and care should be taken to select one nearly matured that the bees may not become too much excited.

Carlsmarkt, Germany.

For the American Bee Journal.

D. A. Jones' Method of Transferring.

WM. F. CLARKE.

When at Beeton, the other day, I was astonished to find Mr. Jones' home yard full of the motliest collection of old gums, time-worn box hives, and other antiquated bee "fixins," that I have ever set eyes on. In anticipation of the arrival of a lot of Palestine queens, he had taken a tour through a secluded section of country inhabited mostly by colored people, and bought up about a hundred colonies of black bees, domiciled in these ancient homes. It only wanted a few weather-beaten straw skips to complete the picture of apicultural antiquities.

The Palestine queens were shipped too early in the season, got delayed among the icebergs in the gulf of St. Lawrence, and only two survived, causing an entry of $1,000 to the wrong side of the profit and loss account in the Jones ledger. The weather was not very auspicious for transferring, but it had to be done, as many of the colonies were short of stores, and some were even swarming out in search of the food which a backward season failed to supply from early spring flowers.

Notwithstanding all the scientific appliances he has at command, Jones is the most "rough-and-ready" bee-keeper I have ever met with. He goes at the business of transferring like a regular backwoodsman, armed with an axe and a bowie-knife. "Bring a hive!" It is brought accordingly, and put in the place of the old hive, which is turned bottom side up, and set beside the new one. "Blow in some smoke." While this is being done, Jones is considering the best place for beginning the work of demolition. Whack goes the axe on the chosen spot. You would think the bees would streak out like lightning. But they don't. That blow with the axe seems to stun them. Soon a piece of the old hive is split out without damaging a bit of comb. More splitting, till the knife can reach the first flake of comb, which, on being loosened, is laid flat on a broad shingle. Presto! The bees are swept off into the new hive with a goose feather, and the comb taken into a house near by, to be fastened into a frame. Flake after flake is thus treated. The bees soon begin to find the new hive, and multitudes of them march into it of their own accord. The operation is all over in about half the time it takes for the usual orthodox drumming.

This expeditious mode of transferring is only practicable when the old hives have little or no honey in them, as was the case with most of Mr. Jones' purchases. In buying black bees for transference, it is good policy to choose populous colonies with but little honey. The gathering season is close at hand, and with plenty of workers, there will soon be plenty of honey. It is a common mistake of beginners, in buying colonies in old box hives, to choose the heaviest. Instead of these, the experienced bee-keeper will pick out the colonies that are short of honey and strong in population. If a hive about to be transferred has a large amount of honey in it, the bees must be drummed out in the approved fashion, and the heavy combs removed with great care. Mr. Jones has a wire cage the size of his frame, into which he puts combs heavy with honey, after fitting them, and extracts the honey before putting the frames into the hive. This wire cage is an admirable contrivance. It consists of two leaves which are hinged, and shut closely on the combs, holding them in place. Any bits of comb containing honey can be fitted into a frame, put in the cage, and extracted by this means.

Many people are very awkward and unthinking about this process of transferring. I met with a man the other day, who had just been trying his hand at it. He drummed out the bees all right, and then proceeded to pry off the top of the old hive. It was pretty well stored with honey, and the consequence was, as might have been expected, that the whole interior collapsed "kersmash," killing young brood and wasting comb and honey at a wholesale rate.

It is astonishing how soon transferred bees, when the job is done properly, settle down to work in their new habitation, "clar up de kitchen," and become as contented as a family that has just moved out of an old log cabin or board shanty, into a comfortable new house.

Mr. Jones fastens the old combs into frames, with cedar strips projecting a little at the top and bottom, the ends of which are fastened with very fine wire. A bee-keeper who, like myself, was on a visit of observation at the Beeton apiaries, mentioned that he used small rubber rings in place of wires to fasten the strips. "Give us your hand," exclaimed Jones. On trial, we found the plan an excellent one.

Listowel, Ont., June 5, 1882.

☞ Do not let your numbers of the Bee Journal for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

For the American Bee Journal.

Wintering in Chaff Hives.

LUCIAN FRENCH.

In September, 1880, I transferred the bees from 6 of my old Langstroth hives into Root's chaff hives, and they have wintered without loss. One colony seems rather weak, but I think will live.

I packed 12 colonies in chaff—the same as in 1879; 3 died, and 2 were so weak that I took one colony from the cellar and put with them to save them. Six colonies in Root's simplicity hive were packed in straw and chaff in large dry goods boxes. One of these died, and 1 was so weak I united it with the others. Twenty-seven colonies on the summer stands came through all right. Of the 23 colonies placed in the cellar 11 died, 6 were very weak, and the remaining 6 were strong. Some bee-keepers in this section of the country wintered their bees on summer stands in the old-fashioned box hive, and met with little, or no loss, though they have but few colonies. I would like to know if overstocking has anything to do with loss in wintering?

I have been experimenting for a number of years, endeavoring to determine the best manner of wintering, and would be pleased to know the method L. James pursues; for surely the wintering of bees should be as simple as that of cattle, horses, etc. I am glad to see the awakening on this subject. I know there are very many attending circumstances to influence, and bring about this end, which we shall all be so glad to attain, and I think S. Valentine, on page 129 of the BEE JOURNAL for 1881, names some of the important causes of loss.

I have thus far had good success with Root's chaff hives, but as it takes "more than one robin to make a spring," I will not shout too soon.

Dexter, Maine.

Connecticut Farmer.

How to Introduce a New Queen.

H. L. JEFFREY.

The first requisite for the safe introducing of a strange queen is the right kind of a cage to use. As good a one as any is made of fine wire cloth about 8 threads to the inch each way. Cut a strip 3 inches wide by four long, turn the edges over on the long sides a quarter of an inch; this makes a hem and prevents raveling out; then pull out two or three wires on the ends, bring both ends of cloth and twist the wires together. Now you have a wire cage about 2½ inches long by 1¼ inch across. Press it flat till it is a half inch oval; then tie two thicknesses of wrapping paper neatly over one end, as close to the end as possible, and trim off the edges of the paper above the string. Take a piece of sponge large enough to fill the other end quite full, wash the sponge perfectly clean and squeeze it dry. Saturate the sponge with honey, put your queen in the cage and then stop the end with the sponge. She is now a prisoner in the cage between the sponge and paper, the honey in the sponge furnishing her with food. You are now ready to put her into the hive.

To prepare the hive for her, if a frame hive, open it and take out the queen if it has one; if not destroy all the queen cells if there are any. If the hive has any sealed honey over brood in the frames, uncap a small place on one of the combs, place the cage with the queen in between this and the next comb, bring the combs close enough together to hold the cage in place, then close up the hive and let them severely alone for 3 or 4 days. The bees will bite through the paper and let the queen out among them very quietly, and there is very little, if any danger of the new queen suffering any harm from the bees. In the last four or five years I have used this way of introducing queens in at least 500 cases without a single failure, and I have tried other methods without success.

Woodbury, Conn.

SELECTIONS FROM OUR LETTER BOX

After Swarming.—I commenced the season after the water went down with 70 colonies; they commenced to swarm on the 27th of March and continued to swarm up to the 5th of May. They suddenly stopped, and up to this time there has been just enough honey coming in for them to live on. At this time (the 5th of May) the honey flow ceased entirely, and I thought I would have to feed them to keep them from starving; but on the night of the 9th of May there came a tremendous fall of honey dew, when all the leaves with a smooth upper surface were covered. It accumulated in large drops, as if it had been poured from a spoon. On the 9th and 10th the bees were working like mad, and seemed to send out every worker that could be spared from the hive. They stored a great deal of honey in those two days; then came a heavy rain on the night of the 10th, and that ended the honey flow up to June 7th. That honey dew was a godsend, for if it had not come I would have had to feed nearly every colony till June 7th. The honey flow has been heavy up to date, and on the 13th inst. they commenced to swarm again. They have been swarming at the rate of 2 or 3 a day up till now. Young swarms that had only one-fifth of their frames filled with comb are swarming. Such as those I return to the hive after pinching off the queen cells, and clipping the old queen's wing. Some of them, after staying 2 or 3 days, will come out again with queen cells barely started. I have kept the honey closely extracted from them, yet they swarm. If they continue to swarm it will cut short my honey yield, for it is high time they were turning their attention to honey-gathering. My neighbors' bees are doing the same way. If some more experienced bee-keeper would explain the cause, and give a plan to prevent so much swarming, I would be very grateful.

W. G. McLENDON.

Lake Village, Ark., June 21, 1882.

[The cause is that in swarming your colonies are never entirely depleted of field-workers. We think if you will hereafter adopt the plan of moving the parent colony from its old stand after a swarm has issued, and placing the new swarm on the old stand, you will have no trouble, as the mature field workers will desert the parent colony, and there will be no old bees to go with the first young queen when hatched.—ED.]

Lamp Moth Trap.—We have had much rain and flooding the past four weeks, and such cold wind, it has deterred our bees from swarming early, but during the last few days the temperature has been about 90° F., and we are receiving some enormous large swarms. In spite of all our wet weather bees have done excellently. White clover has been with us two weeks or more, and promises a splendid yield of honey. I am trying the plan of setting a lamp in a pan of water in my apiary at night, and find it very profitable. It is sure destruction to the bee moth. My neighbor, Mr. David Witt, was last evening showing me his method of management, and called my attention to a strong colony which he said was "cutting down an awful sight of rubbish every night." Being anxious to know the cause, I send you a small package of it. 1. What is it, and what should be done with the colony? 2. Will bees do well put into a Langstroth hive, without either combs or foundation?

FRANK B. RIFE.

Malaby, O., June 11, 1882.

[1. The package mentioned above has not been received at this office.

2. Yes, the bees will do well enough, but they are very liable to build crooked. It is mistaken economy to suppose good foundation is an article of extravagance.—ED.]

Storms in Kentucky.—After a few days of encouraging honey flow, the 16th of June opened with violent rain storms, continuing over the 17th, and accompanied by very high temperature, resulting in the destruction of great numbers of field workers, the sections in many hives presenting the appearance of those left by swarming. Work in the sections was suspended for nearly a week, and many colonies destroyed their drones, even to pulling them from the cells. This, at a time when linden was just opening, was discouraging indeed. This morning it is again raining more violently than ever, accompanied by very heavy winds and thunder, and everything presents the appearance of a stormy day. Our bees appear to have abandoned clover for a white-blossomed weed that is a great pest in old meadows. It is now in full bloom. The prospects for a surplus of honey are very gloomy at this time. Queens have seemed to do their best to render the hives populous, but nothing could prevail against such wholesale destruction of workers, and so many adverse circumstances.

JOHN C. PEDEN.
Lawrenceburg, Ky., June 26, 1882.

[Our correspondent, we hope, will yet realize a good honey crop, despite the apparent unfavorableness of the weather. If summer and fall flowers are usually abundant in your locality, the weather of which you complain will be the very best for developing them. Last season your prospects were much gloomier than now, and yet the asters came in with an abundance of nectar never before equalled by it, and you rojoiced over the happy termination of your misfortunes. Even, however, if your worst fears are realized for this season, it cannot be expected that a territory as vast as ours, with a climate so varied, should every portion be equally as productive in one season, any more than that all soils should rival your famous blue-grass pastures, or that all herds of cattle should equal your incomparable shorthorns.—ED.]

Ready for Linden Bloom.—During the months of April and May, my bees got very little honey and as a result, feeding was necessary to keep away the pangs of hunger. I now have them in a condition where I can muster a large army of workers to take the field as soon as the linden blossoms, which will be in a few days. Mustard is blooming quite profusely now, and bees are working on it some. I saw some dogwood and elder blossoms to-day, but no bees about them. Does it yield any honey or not? The crop prospects here are good.

W. H. MARTIN.
Falls City, Neb., June 25, 1882.

[They undoubtedly both yield honey, but it is either difficult to obtain or obnoxious to the bees; it is seldom they are seen to work on either if anything else is in bloom.—ED.]

Bees have Prospered. — Notwithstanding the cold, backward spring, bees in this locality have prospered. I wintered 50 colonies out of 54. Have had a few natural swarms. Nearly all my colonies are storing honey in the surplus boxes, and some are ready to be raised up. White clover is in full bloom, is abundant, and everything looks promising for a good honey harvest.

MRS. A. M. SANDERS.
Sheridan, Mich., June 23, 1882.

Improvement in Dispositions.—Bees are doing better. The Syrians are far more amiable than they were last year. Can it be handling? My class of 30 go among them with no protection, and receive no harm. They are a great improvement, I believe, on the Italians. I am very sorry for Mr. Jones. It is too bad. For his great enterprise—one of the greatest ever undertaken on behalf of apiculture. He gets only loss, and very little thanks.

A. J. COOK.
Lansing, Mich., June 23, 1882.

[Yes, Professor, you are right in your surmise; frequent careful handling, as we discovered years ago, will very much improve the amiability of almost any colony. Here, again, might arise a doubt, whether it is all instinct which teaches the bee that its proper manipulation is for its benefit, and not to do harm; and this, too, may have given rise to the thought that bees learn to individualize, for we frequently hear old bee-keepers say that their bees can distinguish them from strangers, when it really may be a peculiarity in dress or in the manner of handling.—ED.]

Motherwort for Bees. — Prospects for a honey crop are very discouraging here. Bees have built no comb in the sections as yet, and are not more than making a living. Cold and wet, with but little clover in bloom. Motherwort seems to be yielding more honey than any other plant so far. I have about 2,000 plants of it under cultivation in my experimental garden, and I think 10 acres of it planted the same as corn one way and drilled the other way, would support 100 colonies of bees.

W. T. STEWART.
Eminence, Ky., June 22, 1882.

Wired Foundation.—Will you please inform some of your old subscribers, through the BEE JOURNAL, if the wired foundation can be used in the body of the hive; it twists so I cannot use it?

G. CHOLWELL.
Red Hook, N. Y.

[The strongest recommendations urged by the friends of wired foundation are that it is proof against twisting and sagging. We have used but little of it, and then only in an experimental manner, but were not troubled with its twisting.—ED.]

A Sad Accident.—On the 4th of June I started for Hammondsport, where I have a vineyard, when my horses became frightened and ran away, throwing me out and breaking my leg. I was badly bruised otherwise. I have been unable to attend to my bees since, and as it has been such weather that they required especial care, they have suffered in consequence. I have lost 5 colonies by starvation.

D. S. MCCALLUM.
Big Creek, N. Y., June 15, 1882.

A Valuable Seedling.—I herewith send you a specimen of white clover, which you see is very large, and the blossoms are perfectly white. It blooms from 12 to 15 days before the common or Dutch white clover or the alsike or red clovers. I first noticed it last year growing in front of one of my bee hives, and this year it has spread until there is a patch about 2 yards square, with the seed now ripe, while the common white clover near it, a specimen of which I send, is only coming into bloom. Is this a new seedling, or what is it? My bees are doing first rate, and the fields are perfectly white with clover.

H. BESSE.
Delaware, O., June 27, 1882.

[It is undoubtedly a new seedling, although the size and shape of the seeds differ materially from those of any other variety with which we are acquainted. It is, however, worthy of cultivation, and will prove very valuable because of its extra large size and early maturity. Do not neglect it.—ED.]

Late Feeding.—Bees came through the winter good, but we had a very severe spring on bees; some had to be fed as late as June 17th. They are doing well now, June 23d. It is strange how they have swarmed, even in May, without a pound of honey in the hives, and none coming in.

Hartford, Wis. I. S. CROWFOOT.

More than Doing Well.—The thin foundation is the knob of perfection *magnifico*. Bees are more than doing well now. Swarming has commenced.

P. P. NELSON.
Manteno, Ill., June 24, 1882.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

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Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

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☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance. Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance:

For	**4** weeks		**10**	per cent. discount.
"	**8** "		**20**	" "
"	**13** "	(3 months)	**30**	" "
"	**26** "	(6 months)	**40**	" "
"	**39** "	(9 months)	**50**	" "
"	**52** "	(1 year)	**60**	" "

Discount, for **1** year, in the MONTHLY alone, **25** per cent., **6** months, **10** per cent., **3** months, **5** per cent.

Discount, for **1** year, in the SEMI-MONTHLY alone, **40** per cent., **6** months, **20** per cent., **3** months, **10** per cent.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

◆

☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for 1882, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

Local Convention Directory.

1882. *Time and Place of Meeting.*
July 8—Madison, Wis., at Madison, Wis.
25—Western Iowa, at Winterset, Iowa.
Henry Wallace, Sec., Winterset, Iowa.
Aug. 10—Maine State, at Harmony, Maine.
Wm. Hoyt, Sec.
Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.
Oct. 3-6—North American, at Cincinnati, O.
Dr. Ehrick Parmly, Sec., New York City.
5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.
Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

◆

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 3. 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.
AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for honey is quiet. Extracted brings 7@10c. on arrival. No comb honey on the market worth mentioning, prices nominal.

BEESWAX—Scarce, and brings 20@25c. on arrival. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey is light, prices being made to meet views of purchaser.

BEESWAX—Scarce, and in demand at 23@25c.
R. A. BURNETT, 165 South Water St.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.
CROCKER & BLAKE, 57 Chatham Street.

NEW YORK.

HONEY—White clover, fancy, 1 lb. bxs., 15@16c.; white clover, good to choice, 1 and 2 lb. bxs., 13@14c; buckwheat, 2 lb. bxs., per lb., 11@12c. Extracted and strained, white, 9@10c; dark 7@8c.

BEESWAX—The market continues rather quiet, but the supply is light and prices firmly sustained. Western, pure, 24½@25c.; Southern pure, 25½@26c. D. W. QUINBY, 105 Park Place.

SAN FRANCISCO.

HONEY—Our first consignment of new crop of comb honey was received last week from Hale's apiary, Los Angeles county. It was choice, white, straight combs, and well filled and capped. We sold the lot (about 1,000 lbs.) for **20c. per lb.** Both old comb and extracted are still on market, and sellers are pressing it at low figures. There is not enough doing to give more than nominal quotations. Private advices from the southern part of the State are to the effect that the yield will not be heavy, but the reports have not thus far influenced buyers in the least.

We quote white comb, 15@20c.; dark to good, 8@12c. Extracted, choice to extra white, 7½@8c.; dark and candied, 6@½6c. BEESWAX—23@25c.
STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—In fair demand. Extracted selling at 8@10c.; comb scarce—nominal at 18@22c.

BEESWAX—Prime in demand at 22@23c.
R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—As there is no honey in market, we have no quotations this week.
A. C. KENDEL, 115 Ontario Street.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Three years ago St. Julian, the great California trotter, was unknown; the same may be said of Kendall's Spavin Cure. Now both have a world-wide reputation. Why? Because they both have merit. One is a great trotter, the other is the most successful remedy ever discovered to be used on man or beast. 26w4t

Bingham's Smoker Corner.

☞ I have tried several kinds of Smokers, and none give such satisfaction as Bingham's; 'tis worth more to me than all the rest combined.
Morning Sun, Iowa. J. E. KEARNS.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

STANLEY AGAIN AT LARGE.

We have now secured a quantity of bright yellow wax, and can furnish our thin foundation for sections on short notice. Owing to the rapid advance in the price of wax, we now quote thin foundation at 60c. per lb. for 20 lbs. or more. We shall be able to furnish a limited amount of heavy foundation at 45c. per lb., also tin points for glassing honey at 20c. per 1,000, and wire nails of any size at manufacturers' list prices.
G. W. STANLEY & BRO.,
27w2t Wyoming, N. Y.

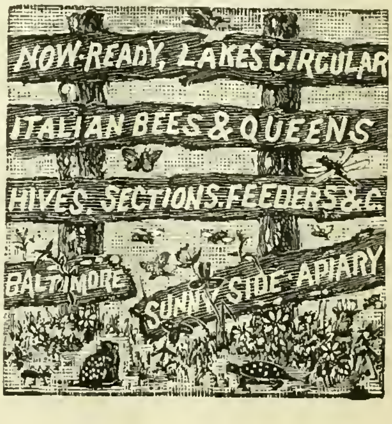
BEAUTIFUL QUEENS — Warranted Italians, $1.25 each; Warranted Cyprians, $1.50 each; Unwarranted Queens, $1.00 each. Try one and you will want more. Address,
27w1tp REV. J. E. KEARNS, Morning Sun, Iowa.

VANDERVORT FOUNDATION

110 **SQ. FEET**, or 11 lbs. $6; more at same rate; less, 60 cts. per lb., delivered at Express, Albany, N. Y. **H. W. GARRETT.**
27w4t Coeyman's Hollow, N. Y.

1882. • Consult your interest, and send for my new circular and price list of colonies, Nuclei and Queens. Address,
9sm8t **S. D. McLEAN**, Columbia, Tenn.

ONE-PIECE SECTIONS a specialty. Pound size, $4.50 per 1,000. L. Hives 50c. Also, Italian bees for $8 per colony. Circular free.
8sm12tp BYRON WALKER & CO., Capac, Mich.



LOOK HERE!

If you want cheap bees and hives to suit, good Cyprian, Albino or Italian Queens, Comb Foundation, all kinds, Section Boxes, and everything a live apiarist needs, send for prices.

Full Colonies and Nuclei a Specialty

with good young Queens Give me a call, friends, and I will try and please you. (Box 819.)

E. T. FLANAGAN, Rose Hill Apiary.
5w1y Belleville, St. Clair County, Ill.

W. Z. HUTCHINSON,

Rogersville, Genesee County, Mich.,

Makes a *specialty* of rearing fine Italian Queens. All queens bred from imported queens, and from the purest and best home-bred queens, and the cells built in full colonies. No black bees in the vicinity. Single queen, $1.00; six queens for $5.00; twelve or more, 75c. each. Tested queens, $2.00 each. Safe arrival by mail guaranteed. Send money by draft, registered letter, or by money order drawn on Flint, Mich. 26smtf

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1882-Southern Headquarters.-1882

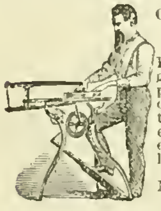
For Early Italian and Cyprian Queens ;

Imported and Home-bred ; Nuclei and Full Colonies. For quality and purity, my stock of bees cannot be excelled. I make a specialty of manufacturing the Dunham Foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Catalogue, giving directions for introducing queens, and remarks on the New Races of Bees. Address,

DR. J. P. H. BROWN,
5smtf Augusta, Ga.

BARNES' PATENT

Foot Power Machinery



CIRCULAR AND SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

THE RURAL CANADIAN,

A Fortnightly Journal of

Agriculture, Horticulture and Rural Affairs.

Edited by W. F. CLARKE, and

Published at 5 Jordan street, Toronto, Ontario, Canada, at $1.00 a year, by C. Blackett Robinson, Liberal inducements to local agents. 44mtf

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GERMAN

POULTRY AND BEE GAZETTE.

Deutsche Gefluegel und Bienen-Zeitung.

The only paper of its kind in America ; 75 cents a year—sample copies 10 cents.

C. C. STUECKER, Publisher,
18mtf **Louisville, Ky.**

MY 16-PAGE PRICE LIST of Italian, Cyprian and Holy Land Bees, Queens, Nucleus Colonies and Apiarian Supplies, will be sent to all who will send me their name and address on a postal card. **H. H. BROWN,**
14smtf Light Street, Col. Co., Pa.

PURE ITALIAN QUEENS—Bred from selected tested Queens ; also, Chaff and Simplicity Bee Hives, all kinds of Sections, Wide Langstroth frames, and all kinds of Apiarian Supplies. Send for Price List. A. B. MILLER & SON, Wakarusa, Elkhart County, Ind. 21sm4t

---

Pure Italian Bees

at reasonable prices.

FULL COLONIES IN LANGSTROTH HIVES,

QUEENS AND NUCLEI.

Satisfaction guaranteed in every sale.

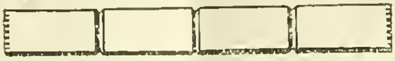
22w8t **JOHN F. DIPMAN,** Fremont, Ohio.

Italian Bees, Queens and Sections.

Untested Queens, in May, $1.50 each ; in June, $1.25 ; July and after, $1; per dozen, after July 1, $10. Sent by mail, with directions for introducing. Italian bees by the half pound, same price as untested queens. One 2 comb nucleus, without queen (Gallup frames), in May $3, June $2.50, July and after $2 ; 2-comb nuclei, with the standard Langstroth frames, 25 per cent. more. Sections—Planed dovetailed sections, 4¼x4¼x1¾, $4.50 per 1,000 ; 5½x5½x1¾, $5 per 1,000. Sections of this thickness do not need tins between them to insure straight combs, and the bees can ripen up and seal honey faster than in combs with deeper cells. See testimonials in March number of *Gleanings*. Please remit by P. O. money order, by registered letter, or by draft on New York or Chicago. Address,

O. H. TOWNSEND,
19mtf Kalamazoo, Kalamazoo Co., Mich.

Langstroth Hives & Sections.



Lewis' Improved One-Piece Section.

Price $4.50 per 1,000, any size to 6x6.

No. 1—First quality, dovetailed, any size to 6x6, $4.50 per 1,000.

No. 2—Second quality, dovetailed, any size to 6x6, $3.50 per 1,000.

No. 2 is planed smooth one side, same as No. 1, but lumber is not as clean and white.

LEWIS' ONE-PIECE BOXES, of white Basswood, all sizes, VERY LOW. No charge for boxing or crating sections.

Send for new Price List.

C. B. LEWIS,
January 1, 1882. [1mtf] **Watertown, Wis.**

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to A. I. ROOT, Medina, O.

1882,--QUEENS--1882,

I am now booking orders.

Warranted Italian Queens $1.00, six for $5.00 ; Tested do., after June, $1.50. Cyprians, Unwarranted, $1.00, six for $5.00. Send for circular giving description and recommendation from Postmaster and county officers. Money order office, Versailles, Ky.

J. T. WILSON,
1mtf Mortonsville, Woodford Co., Ky.

1882. JOSEPH D. ENAS, 1882.

(Sunny Side Apiary,)

Pure Italian Queens,

BEES, COLONIES, NUCLEI,

Extractors, Comb Foundation, etc.

Address, **Sunny Side Apiary,**
9m8t Napa P. O., Cal.

NEW IDEAS.

Foundation ready for business, sheets bound with a light wooden rim, sample 6c; Bee's Tongue Register, sent by mail for $2.25 ; Italian Queens improved by a new process ; Italian or Black Bees for sale in a hive adapted to migratory bee-keeping—can be securely closed for moving in one minute. For particulars address,

9sm1y **JOHN H. MARTIN,** Hartford, N. Y.

Be SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian, Cyprian and Holy Land Queens and Bees.

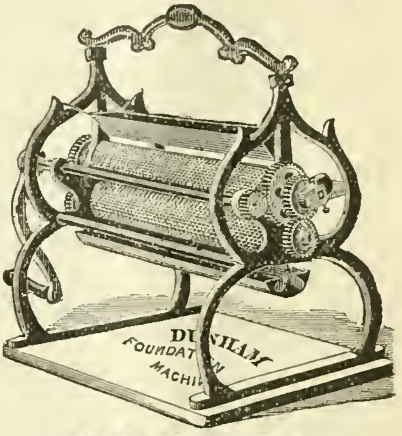
J. C. & H. P. SAYLES,
4sm15t Hartford, Wis.

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. *Sells at Sight.* Double your money Address Dr. Chase's Printing House, Ann Arbor, Mich
36m1yp

FRANCES DUNHAM,

Inventor and Sole Manufacturer of

THE DUNHAM



FOUNDATION MACHINE.

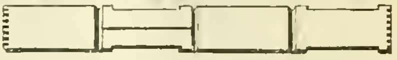
Patented Aug. 23d, 1881.

☞ Send for New Circular for January, 1882.

CAUTION.

Having obtained LETTERS PATENT Number 246,099 for Dunham Foundation Machine, making comb foundation with base of cells of natural shape, and side-walls brought up to form an even surface ; also on the foundation made on said machine, I hereby give notice to all parties infringing my rights, either by manufacturing said machines or foundation, as well as to all parties purchasing machines as above, other than of my manufacture, that I am prepared to protect my rights, and shall prosecute all infringements to the full extent of the law. **FRANCES A. DUNHAM,**
23m4t DePere, Wis.

HIVES AND SECTIONS.



We are in better shape than ever to furnish Bee Hives and Sections, having remodeled our machinery, and put everything in tip-top order for the coming season. We make a specialty of our

"BOSS" ONE-PIECE SECTION.

We have not sold any rights to manufacture, therefore we are the sole manufacturers in the United States. Send for Price List.

JAS. FORNCROOK & CO.
Watertown, Wis., Dec., 1881.

NOTICE—Some persons having infringed upon our Patent "One-Piece Section," we hereby give notice, that we shall prosecute all manufacturers. We shall not molest bee-keepers for USING those purchased before Dec. 1st, 1881, but hereby caution them against buying any except those bearing our stamp. It has been reported by some that it is our intention only to prosecute bee-keepers for using those One-Piece Sections heretofore purchased ; this is wholly untrue and false.

JAS. FORNCROOK & CO.
Watertown, Wis., Dec. 15, 1881. 51mtf

HEADQUARTERS IN THE SOUTH

For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November. ☞ Send for my Illustrated Catalogue.

5mtf **PAUL L. VIALLON,** Bayou Goula, La.

C. Olm's Comb Foundation Machine.

☞ Send for Sample and Circular.

18mtf **C. OLM,** Fond du Lac, Wis.

100 Colonies

FOR SALE. ALSO,

TESTED AND DOLLAR QUEENS

AND

BEES BY THE POUND.

Send address for prices.

1w35t **JAMES HEDDON,** Dowagiac, Mich.

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1wly **D. S. GIVEN & C.,** Hoopeston, Ill.

1882-J. S. TADLOCK.-1882

LULING, CALDWELL CO., TEXAS.

Breeder of Pure Italian Queens. I use one of J. H. Nellis' best imported queens. Tested Queen, $2.50; per half-dozen, $13.50. Select Tested, $3; per half-dozen, $16. No "Dollar" or nuclei-queens handled. Safe arrival and satisfaction guaranteed, if possible. 14w39t

1882.-ITALIAN QUEENS.-1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby Smoker for $1.50. Address all orders to

L. J. DIEHL,
(Money Order Office)—Butler, Dekalb Co., Ind.
10wtf

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
13wtf Abronia, Mich.

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

—"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Comb foundation on Dunham machine, 25 lbs. or over, 35c. per lb.; on Root machine, thin, for boxes, 40c. per lb. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1wly.

PRIZE QUEENS FOR 1882.

From the Evergreen Apiary.

REV. E. L. BRIGGS. of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

FLAT-BOTTOM

COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen	$4.50
2-frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1..	2.50
" " per half doz., after July 1	13.50

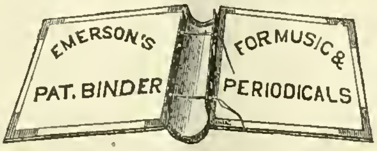
Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,
1wtf Burlington, Iowa.

BIND YOUR JOURNALS

AND KEEP THEM

NEAT AND CLEAN.



The Emerson Binder

IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Bee Journal of 1880	50c.
For Bee Journal of 1881	85c.
For Bee Journal of 1882	75c.

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

65 *ENGRAVINGS.*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book. G. W. FISHER,
Box 238, Rochester, N.Y.

☞ Also for sale at the BEE JOURNAL Office. ☜
2w6m.

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **24c.** per pound, delivered here, Cash on arrival. Shipments solicted.

To avoid mistakes, the name of the shipper should always be on each package.

ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL

HEADQUARTERS FOR THE

Golden Italians & Original Albinos,

BEES AND QUEENS.

Send for Circular. **J. M. C. TAYLOR,**
10smtf Lewistown, Frederick Co., Md.

A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

925 W. Madison Street, Chicago, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

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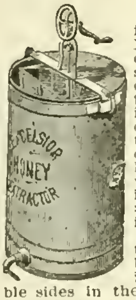

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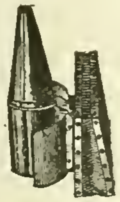

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It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To al taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

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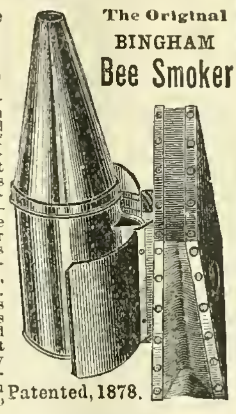
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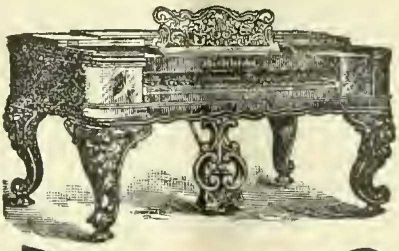

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.. 433
Department of Apiculture.......................... 433
Fertile Workers—So Called......................... 434
Honey Labels.. 434
Saccharine Secrets 434
Transferring 434
Exceptionally Bad Honey Prospects...... 435
Vennor's Forecast of the Weather 435
Annals of Fort Mackinac.......................... 435
Negroes as Bee-Keepers 435
Bee-Keeping in Ceylon............................. 435

Among Our Exchanges—

A Swarm of Bees on a Telegraph Pole.... 435
Do Bees Injure Sound, Healthy Peaches? 436
Knowledge of Bee-Culture....................... 436
"Open Secrets"... 436
Untested Cheap Queens........................... 436
Bee-Keeping in California in 1873 436
The Objects of Fairs 436

Correspondence—

Progrrssive Transferring......................... 437
How I Introduce Queens........................... 437
Drones and Their Functions 437
Prolonging the Life of the Queeen Bee... 438
How to Fasten Foundation, etc.............. 439
The History and Antiquity of the Bee.... 439
The Barberry Shrub Again 440
International Congress at Milan, Italy 440

Convention Notes—

Italian Bees as Robbers.......................... 441

Selections from Our Letter Box—

A Bee House 441
Honey from Red Clover........................... 441
Deserted the Hive.................................... 442
Subjects Anticipated................................ 442
Doing Better 442
A Hard Season... 442
Doing Excellently.................................... 442
From a Beginner...................................... 442
Motherwort.. 443
Prospect Excellent 443
Captured while Laying............................. 413
Bees are Doing Finely.............................. 443
Cold Wave.... 443
A New Clover 443
Honey Prospects in Ohio.......................... 443
Not One Pound Yet.................................. 443
Mercury at 50°........ 443
A Curious Circumstance 444
A Failure 444
Not so Bright.............................. 444
Foundation Making.................................. 444
Working in the Sections.......................... 444
Why the Dysentery?................................ 444
Immense Beginning................................. 444
The Verdict of the Jury 444

Department of Apiculture.

It is proposed to have a professor of apiculture appointed in England as we learn from the London *Journal of Horticulture*. Mr. A. Pettigrew made the proposition, and being asked to name a person for the place, says:

> The question of the country being ready for a professor was asked, and also if a man qualified for the work could be found. Those questions were answered as fully as it was thought desirable then. We have made considerable advances during the last two years, and it appears to me now that a new departure or fresh advance should be made as soon as the authorities will sanction it. Would you appoint one or two professors? Two. One for England, and one for Scotland and Ireland; both would have plenty to do. Have we any men amongst us ready for the work? Yes, I think we have two well qualified; but I hesitate to point them out by name, though I fancy no harm would be done to anybody by mentioning the names of the two gentlemen who appear to me most qualified as professors of apiculture. Mr. William Raitt, of Blairgowrie, I would nominate for Scotland and Ireland, and Mr. Frank Cheshire for England. Perhaps they would not accept such appointments if they were made. Both are advanced and enthusiastic bee-keepers, and good lecturers and instructors.

The AMERICAN BEE JOURNAL would heartily approve the choice of these gentlemen, knowing their ability to lecture as well as to impart sound instruction on progressive bee-keeping.

England is making rapid strides in progressive bee-keeping, and this is a step in advance of the United States, though in many things we have set them a wholesome example. We have often thought what a boon it would be to thousands of our people in Illinois, especially those with a professional and literary turn of mind, and the many who are physically incapacitated from earning an honest and comfortable livelihood at hard manual labor, if a Profesforship and Department of Apiculture were added to our already efficient and able Illinois Industrial University. It would open up the possibility of an independence to thousands of women who now eke out a miserable existence in the crowded cities, because the avenues of rural industry are comparatively closed against them. The apicultural field is broad; no State in the Union can boast of better natural facilities for honey gathering, and no State is more illy supplied with bees according to its resources than Illinois, and yet skilled bee-keepers, or scientific apiarists, can scarcely be employed at any price. Nothing is more needed than an apicultural department under State patronage, and nothing would contribute more to the State revenue in proportion to the outlay. The department could appropriately be combined with the Botanical and Horticultural, and if he could be induced to supervise it, no one could be found more competent to occupy the professional chair than Prof. T. J. Burrill, the learned scientist.

☞ The Postmaster General recommends to Congress the reduction of letter postage to 2 cents; this will be a good thing, for many who now use postal cards would send letters, if the postage on them were but 2 cents. Some other changes are proposed, but none of them may be made. We shall see.

☞ We have received price lists of bee-keepers' supplies from Roys & Morgan, Columbus, Wis., and J. D. Goodrich, East Hardwick, Vt.

Fertile Workers—So Called.

Dr. I. P. Wilson, Burlington, Iowa, forwards the following upon the above subject:

Is there such a thing as a fertile worker? No. Is there such a thing as a laying worker? Yes. The eggs of a virgin queen will hatch, and all the bees be drones. The eggs from a worker will hatch, and they, too, will all be drones. Both the queen and the worker are females—the one perfectly developed and capable of being fertilized, the other imperfectly developed, and not capable of being fertilized. There is no such a thing as a *fertile* worker, any more than there is such a thing as a fertile virgin queen, hence the term "fertile worker" is a misnomer, and should be abandoned by scientific bee-keepers. What do you say, Mr. Editor?

We must say, while we have the highest regard for Dr. Wilson personally, and the deepest respect for his opinions, we wholly disagree with his first negative. The admission that there are workers which lay eggs, and that those eggs will be productive of drones, is an acknowledgment *per se* that they are fertile workers, if we place any value upon the definition of the word "fertile," as given by the compilers of Webster's Unabridged Dictionary, which is almost universally acknowledged the best lexicon of the English language. The word is there defined:

FERTILE. [Lat. *fertilis*, from *ferre*, to bear, produce; Fr. *fertile*, Pr., Sp. and Pg. *fertil*; It. *fertile*.]

1. Producing fruit in abundance; fruitful; able to produce fruit abundantly; prolific; productive; rich; inventive; produced in abundance; as, *fertile* land or fields; a *fertile* mind or imagination.

2. (*Bot.*) Capable of producing fruit; fruit bearing; as, *fertile* flowers or anthers.

Syn.—FERTILE, FRUITFUL. *Fertile* implies the inherent power of production; *fruitful*, the act. The prairies of the west are *fertile* by nature, and will soon be turned by cultivation into *fruitful* fields. The same distinction prevails when these words are used figuratively. A man of *fertile* genius has by nature great readiness of invention; one whose mind is *fruitful* has resources of thought and a readiness of application which enable him to think and act to effect.

The first clause in the synonym covers and justifies the use of the word "fertile" as applied to laying workers, as also to virgin queens which lay eggs that will hatch drones, for each possesses the "inherent power of production." If there is any impropriety in the use of the word, it is in connection with the queen after mating, for it then implies a queen can only produce progeny after mating, when the reverse is true. A queen, as also all workers, under certain conditions, for aught we know to the contrary, possess the inherent power of production of drones, but not reproduction of kind, *i. e.*, workers or queens. It is true the derivations from the word "fertile," as frequently used, would imply an after preparation or qualification, as, to fertilize soil when it is already fertile, or the fertilization of the queen, when she is by nature inherently fertile. We might as appropriately claim that education was necessary to man to fertilize his brain.

We are not altogether certain that science has yet determined how far the queen possesses the inherent power of production. We do know that in the continued absence of a queen from a colony of bees, if there be no eggs nor larvæ from which to rear another queen, fertile workers are liable to be developed; or, if a young queen be reared and she fails to mate with a drone, she will be fertile with drone progeny only; or, if she be injured or become very old, she will lay only eggs which develop drones. Certainly, nature has had some wise purpose in providing for all contingencies with drone progeny, and there remains for science the deepest mystery yet unsolved, to determine how far the perpetuation of the colony depends upon drone progeny only; as also the economic necessity for fertile workers when all other resources have failed.

We can see no objection to using the words "laying worker;" but custom has sanctioned and legitimatized the use of the word "fertile" in this connection, and certainly the strict definition of the term justifies its use.

Honey Labels.—We have received samples of some very attractive lithographic labels for honey, from Mr. D. A. Jones, of Beeton, Ontario, Canada. They are mainly intended for extracted honey in tin pails, but some are suitable for sections of comb honey. They are not only exceedingly handsome, but, being varnished, they will not easily become soiled. The figures of straw hives on nearly all of the labels may be objectionable to some apiarists having progressive ideas. These, however, could be omitted without detriment to the present handsome appearance of the labels. The BEE JOURNAL has urged the necessity of attractive labels, and Mr. Jones has happily caught the inspiration.

Saccharine Secrets.—This is the main caption of a lengthy article in the Chicago *Tribune* of July 6th. Our readers are undoubtedly aware that much time and money have been expended in the effort to make cane sugar from grape sugar—that is, to make from glucose a granulated sugar free from the gummy or waxy starch which characterizes all grades of glucose; but until quite recently, it appears, misdirected science has been unable to overcome the difficulties in the way of its successful accomplishment. Latterly, however, Prof. H. C. Friend, of Chicago, claimed to have discovered a method whereby he could transform 100 lbs. of grape sugar into 96 lbs. of perfect cane sugar. Now, as ordinary cane sugar contains but 86 to 96 lbs. of saccharine matter, it will readily be seen the *Professor* (if correct) would make a superior article from the bogus.

Finally, this wily Friend succeeded in persuading several capitalists to join him in his enterprise; a stock company was organized with a capital of $2,000,000; machinery was purchased; quarters were fitted up, and the royal road to wealth seemed fairly opened. But unaccountable delays occurred. Anxious days spent by the stockholders were lengthened out into weeks, and these accumulated into months, and yet no *sweet* reward did the stockholders behold, excepting the beautiful samples which the *Professor* exhibited as the result of many successful experiments in his laboratory. Hope gave way to distrust; distrust gave way to dispair; and this was succeeded by desperation. The Treasurer brought suit against the company for rent, and other parties brought suit for moneys advanced, while warrants were sworn out for the arrest of the friendly *Professor*, charging him with obtaining money on false pretenses. Probably many others will mourn the spasmodic collapse of the "Grape and Cane Sugar Refining Company," and anathematize the scientific "sheeny."

Transferring.—We wish to call especial attention to Mr. Heddon's article on transferring, on page 437. It is the most practical article on the subject we have yet seen in print, and will prove valuable to any person having bees to transfer. We have practiced a similar method upon several occasions, and had thought of writing an article on the subject, but have never been able to reach it.

Exceptionally Bad Honey Prospects.

New York generally, some portions of Kentucky, and districts in California seem especially unpromising for a large honey yield this season. Mr. J. P. Moore, Binghamton, N. Y., writes under date of July 4th :

> The silver lining of the clouds you speak about in the BEE JOURNAL, has not been discernible to the naked eye of any bee-keeper of this State I think. Or if any of them had a glimpse of it, it has all fallen out by this time, as we are not going to get any surplus from clover, nor from anything else this season, unless we have a radical change in the weather. What we are afraid of now is that we shall not get honey enough to winter our bees.

Portions, or, perhaps, the whole of New York, and districts in other States, may be exceptions; but even yet, with favorable weather from this on, the honey yield will be good. Certainly there never was a more abundant white clover bloom in the United States than this season, and linden promises everything that could be desired from it. In illustration of our vastness as a country, the New York *Tribune* gives the following :

> If the sun shines through the 24 hours on British territory it may also be said that the reaper runs all summer in the United States. The harvester fights it out on his line from middle spring to early autumn. At Americus, Ga., on the 19th of April, a ripe field of wheat was cut, and others in Texas and elsewhere not much later. Texas will finish in May, Tennessee in June, Illinois and Ohio in July, Iowa in August, and Minnesota may gather some late fields in September.

Undoubtedly summer and fall bloom will be equally good. Sweet clover is coming on rapidly, and though late, is thrifty and will be very productive of nectar. Fortunately, the districts spoken of form the exception—not the rule.

Vennor's Forecast of the Weather.—He predicts a "cold and stormy autumn," and a very "severe winter." It will be well for bee-keepers to make preparations for such, and if it comes as this "weather prophet" intimates, they will not be "caught napping." He says :

> The general outlook for the weather of the summer season in Southern and Southwestern sections is improving, owing to the continuance of very windy weather in Northern and Western sections of Canada and the United States. But a "windy spring makes a severe autumn;" therefore the outlook for the autumn of 1882 is increasing in severity. My theory of "weather relationships" is working just now in a telling manner all over the Northern hemisphere, and I feel much greater confidence in predicting the periods of the more marked disturbances. Hence, I herewith reiterate my previous statements respecting "a very cold and stormy autumn," and early setting in of extreme severity, with heavy snowfalls, this reaching to remote southerly points. We are likely to experience one of the coldest periods in a long term of years during the early part of the winter of 1882-83, but the cold will come in a lump, and the latter half of the winter is likely to be mild and open, with an advanced spring.

Annals of Fort Mackinac.—We have received from Lieut. D. H. Kelton, U. S. A., a copy of an interesting book bearing the above title. The history and legends of the book are interspersed with several scenic engravings of ancient and modern times. We have had a personal acquaintance with Lieut. Kelton, of several years' standing, and this is just such a work as we would anticipate from a man of his accomplished education and discriminating judgment. In the preface to the work he says :

> Besides information derived from official sources, including the records on file in the Fort, the old books of the American Fur Company, the records of the village and county of Mackinac, and of the churches of Mackinac and St. Ignace; old documents in the hands of private individuals have also been examined, and much matter obtained which it is believed has never before been in print.

Negroes as Bee-Keepers.—The *Indiana Farmer* republishes our item with the above caption, on page 378, with the following remarks :

> To the superiority of Indiana's educational system then, belongs this credit, for we are pleased to inform our esteemed contemporary and its worthy correspondent, that we have several in this part of the country. One, a colored lady, living a few miles north of this city, has charge of thirty odd colonies and is fully up to the times. She gets a fancy price for all her honey, and grumbled not a little because some of the sections which we sent her were not all pearly white.

Our remarks were based upon our observations in the South, where ignorance and superstition prevail largely among the colored people. We suppose in Indiana they have had facilities and inducements for improving their knowledge regarding bees, as well as in everything else tending to elevate and enlighten the race.

Bee-Keeping in Ceylon.—Mr. J. Matthew Jones, Waterville, N. S., sends us the following interesting extract from a recent work entitled "Hoffmeister's Ceylon and Continental India," illustrating the primitive methods pursued in those countries:

> The ground floor of a native's house at Mookha, in the Himalayas, contained the stalls for cattle, and the bee house. The latter occupied one whole side of the house in which the window slits were walled up, leaving only fly-holes for the bees on the lower edges; all the rest being closed with cow dung. The entrance to this apiary was on the opposite side from that to the dwelling houses, and it was with the greatest difficulty that I obtained permission to cross the threshhold, as the people were afraid that I might take possession of their honey. I found within a perfectly dark chamber, three feet high, in which, resting on a low wooden stand, were the bee hives, a sort of square tubes formed of four planks, connected in front with the fly-holes, and open behind toward the dark room. When the honey had to be taken out, which was done in July or August, a fire of cow dung was made in this little chamber, the smoke of which drove the bees out by the fly-holes. They soon return, however, and build anew.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

A Swarm of Bees on a Telegraph Pole.—The Philadelphia *Record* publishes the following item among its local news :

> For nearly a week past a swarm of bees has been domiciled on a chimney-top over the buildings at the northwest corner of Third and Chestnut streets. Yesterday morning they migrated to the top of a telegraph pole on Third street, above Chestnut, and from the street the pinnacle looked as though it had been dipped in a pot of tar. Great crowds collected at the corner to view the curiosity. The interest heightened when at midday a telegraph lineman mounted the pole with a hive improvised from a soap-box and attempted to capture the bees. He preferred to coax the insects rather than drive them, but after a patient but unsuccessful effort he left the box in inviting proximity that the bees might hive themselves at leisure. There was no apparent diminution in the size of the swarm on the pole until just before 7 o'clock, when, reinforced by an assistant, the lineman swept them into a larger box and departed with his prize. He was inspired by a promise of $12.50 if the swarm should be secured.

Do Bees Injure Sound, Healthy Peaches?—The Massachusetts *Ploughman* remarks as follows:

This question having been put to us some years ago, we have very naturally watched the operations of the bees on the peach trees ever since. The results of this examination have been to draw conclusions different from those entertained by many others. In consequence of this we have been slow to express an opinion, thinking possibly further observation might lead to a different conclusion, but as year after year only gives additional evidence of its correctness, we give to our readers the result of our observation, hoping by so doing to encourage closer observation and to draw out opinions.

The first year or two of observation disclosed the fact that the wasp evidently commenced the work of puncturing the fruit and that the honey bee followed. This at first led to the belief that the wasp was the first cause of the destruction; but, on further examination, it was observed that some of the trees in the orchard were entirely exempt from injury, and in fact, that some whole orchards were perfectly free from injury, not a peach being punctured; this led to a still more careful examination, when it was found that most, if not all, of the fruit punctured, had on one side a decayed spot before punctured. On some peaches the decayed spot was very small and on others quite large, but whatever the size, the wasp would puncture the fruit very nearly in the center of the decayed spot, which has led many to believe that the decay is caused by the puncture, when observation seems to prove that the decay invites the wasp to make the puncture. Being satisfied of this the next investigation was in a direction to ascertain the cause of the decay, when it was in every instance found to be the yellows. We have yet to see the peach orchard, the fruit of which has been injured by the bees that has not been struck by the yellows, and, so far as we have observed, the fruit of every tree that has the yellows will be attacked by the bees.

Knowledge of Bee-Culture.—The London *Journal of Horticulture* remarks as follows on the knowledge of the science of bee-keeping in Great Britain:

Within the last dozen years greater efforts have been made to spread a knowledge of apiculture than were made for more than half a century before in England and other countries; and what have been the results? A wider and deeper interest is taken in the subject, and a greater desire for knowledge has been created. In these times of extensive emigration it appears desirable to extend a knowledge of apiculture throughout the country. To know well how to manage bees profitably is worth very much to working men living in rural districts. Many such men who are versed in bee-keeping would not give the annual average profits from bees for the rents of 2 or 3 cottages such as they live in. We shall doubtless hear reports of great and wide-spread success, and the story of the value of bees to the community will be better told and confirmed. It is known that in some colonies, and in certain districts of America, bee-keeping is an unfailing source of income to those who understand and practice it. The thousands of barrels of honey containing from 1 to 3 cwts. each that find a market in England every year tell us of busy people in countries rich in honey.

The bee-keepers' Association and some county associations kindred in character and objects, are making laudable efforts to teach apiculture. These associations are rising in public estimation, and becoming stronger financially every year. Much honor is due to the Rev. H. R. Peel, Hon. Secretary of the Bee-Keepers' Association, who labors indefatigably to awaken public attention to the importance of bee-keeping.

"Open Secrets."—The *Farm, Herd and Home* very wisely concludes as follows:

Apiarian humbugs of one kind and another still infest the market, and bee-keepers, or those intending to become such, need be put on their guard against them. It should be understood that there are now no "mysteries of bee-keeping," except to the class who do not read publications on apiculture. The secrets of this business are all "open secrets." Any parties who offer by mail or otherwise to make known "new methods," by which fortunes can be speedily made out of bees, merely trade on the ignorance and credulity of the public. Patent hives, moth-traps, and all such devices for money getting, have had their day, and bee-keeping has been reduced to a business, the principles of which are the common property of all intelligent and well-informed apiarists.

Untested Cheap Queens.—The *Bee-Keepers' Magazine* is now discussing the matter of the utility of cheap untested queens. The editor remarks as follows:

We think all queen breeders will agree that no one, whose time is of any value, can afford to properly rear queens and send them out, on individual orders, at $1. We do believe that the vast majority of the so-called dollar queens are reared in nuclei, and some of them by the aid of artificial heat. In the South where hot weather prevails for so great a portion of the year the case is different, and the quality for endurance, of queens reared there by these loose methods is undoubtedly far superior to those reared in this climate. Queens exactly alike in all other respects should not differ in price $2.00, simply because one has to be kept 21 days in order to see her progeny. Rather dear board for even a queen.

Bee-Keeping in California in 1873.—The *Semi-Tropic California* gives the following as a scrap of history on bee-keeping in that State:

In November, 1873, forty members of the Los Angeles County Bee-Keepers' Association owned 1,406 hives of bees, which produced for the season, 68,268 pounds of honey. The average price for the product of that year was 22½ cents, whether sold in San Francisco or other markets. The largest apiary was owned by Maloy & Stone, and numbered 257 hives, and the smallest number reported was one hive owned by Mr. Orick. At that time but few of the bee-keepers of the county were acquainted with the better implements now in use by the bee-keeper of to-day, yet the results of the year's work was more satisfactory than in any subsequent year, so far as the financial result was concerned. At that time large tracts of land were lying uncultivated, and covered with honey-producing shrubs and plants, to-day those tracts are mainly under cultivation, either in orchard, vineyard or grain. The grain field, except corn, yields no nectar, and the bee-keeper, if he wishes to succeed, must plant or cultivate such crops as will produce honey, if he expects to do as well as was done in 1873. The new markets opened up by recently constructed lines of railways, give promise of greater demand for our unrivaled honey. So far as quality is concerned, we can fairly compete with the world, and nature has given to Southern California the climatic conditions for successful bee-keeping. If thoughtful, careful industry is turned toward the business, there is every reason to believe that better results may be obtained than was achieved by the bee-keepers of this country in 1873. It would be well for every bee owner to keep a careful account of this year's product of honey, the number of hives of bees owned by them, and the price obtained per pound for honey this year, and report the results to the Association at our November meeting.

The Objects of Fairs.—An exchange makes the following remarks on this subject:

The true position of fairs is schools of instruction. It is not enough that one may grow a better crop than another, but that he may instruct others how to obtain similar results. The object of exhibition is not merely to get a prize, but to incite others to good works. If one has grown a fine animal, a large crop, or made a valuable piece of machinery, he has had his reward already, and the object of exhibition is to show others what may be done and teach them how to do it. Especially can fairs become schools for the instruction of youth; they there learn to observe, and at sight to classify the various breeds of animals, becoming familiar with the characteristics of each, and their valuable qualities.

CORRESPONDENCE

For the American Bee Journal.

Progressive Transferring.

JAMES HEDDON.

I was a little surprised at reading two articles in the last issue, from two of our leading correspondents, both giving directions for transferring bees, the same as has been given over and over again, in bee books and papers for the past 25 years.

Have we not progressed any? Is there no better method of getting colonies out of rejected hives, into those of our choice? I think there is.

Mr. Hutchinson says: "Pry off the side of the hive, cutting the nails, if necessary." Now, I would not do this at all, till all the bees and brood were out of it, but whenever I did do it, I would do so this way: The grain of the boards nearly always runs up and down, and all you have to do is to split off about 1 inch of each of the side boards that are nailed to the other two boards, taking away the part that the nails go through, and if the combs are previously loosened, the one side will nearly fall down. You can, on this plan, cut out the corner of most any box hive, and then cut the combs from the sides of the hive, and split these sides up into kindling wood as you go along, which gives you free access to the combs as you advance. It is so much easier, quicker and quieter a process than to "pry or cut the nails."

But I do not want any combs that have been fastened into frames by the use of "thorns, rubbers, sticks, wires," etc. I have transferred many hundred colonies, and have bought quite a number transferred by others (among them some of our most successful and skillful apiarists). I have examined transferred colonies in other apiaries where I was visiting, and I will tell you again, that I do not want any transferred combs in my yard.

True, once in a while we meet with a comb that is in perfect shape to fill our frame with choice, all worker cells, but such are the exceptions to the rule. I believe that, on an average, transferred combs are as much behind those naturally built in empty V guided frames, as these latter are behind those drawn from worker foundation, in full sheets and on wires.

When I transfer, I put 8 of these wired frames of foundation into my Langstroth hive, and with said hive and drum-box and smoker in hand, I approach the "old gum" and drive a prime swarm and the queen into this hive, which is a hive of beautiful combs 48 hours later.

After 21 days, the worker brood is all hatched and a new queen just begun to lay in the old gum. Now I can drive again, into another just such hive, or I can unite with my first drive, piling up the surplus soon, as I please, whether I desire increase or not. In either case the forced queen, reared in the depleted "gum," should be killed, and if increase is the order of the day, a new queen from some other source is substituted for the second drive. Then is the time to do your splitting open of the "old gum," and you have some first class kindling wood, a nice lot of extracted honey (after you empty the old combs), and some comb to melt up into wax for more comb foundation.

Once try this plan, and you will see here, too, that new inventions suggest new and improved methods. Pure comb foundation, always a great boon, and now a staple, not only aids the bees in supplying their costliest substance, but it aids the bee-keeper in getting his combs straight, and more of them, in less time, getting his surplus combs perfect, controlling the blood of his drones, and consequently, queens and workers, besides revolutionizing the process of transferring.

Dowagiac, Mich., July 4, 1882.

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Farmers' Home Journal.

How I Introduce Queens.

G. W. DEMAREE.

To introduce queens there are but two methods employed that differ materially. One of these methods is to cage the queen to be introduced, and to place the cage (wire-cloth) down right on the frames over the cluster of bees and cover the bees, cage and all, with the bee quilt, and let them alone forty-eight hours, then turn up the quilt till the cage is exposed to view; now draw out the sliding door and let the queen run out among the bees. Keep your eye on her, and if she is permitted to run down among the bees without being molested, close up the hive and wait fifteen or twenty minutes, then open the hive gently and look up the queen. If the bees are not ready to accept her, you will find her imprisoned in a ball of bees, generally on the bottom board. This we call "balling the queen." Don't be nervous or in too big a hurry; just take a large spoon and dip up the ball of bees and turn them out into a pan of water. This will cause them to release her, and set them to swimming for life. Pick out the queen by catching her wings between the thumb and finger. She *positively will not sting.* Never take hold of the queen by the abdomen, as you may injure her.

Now, return her to the cage and place it back just as before, and leave it twenty-four hours and try them again, and so on till she is accepted. She will generally be accepted without all this trouble, but not always. The queen will generally begin to lay in one or two days after she is accepted by the bees, and after she begins to lay she is as safe as if she had been raised in the hive. For this reason I keep a watch over her till she has deposited her first eggs.

The other method is to cage the queen on a comb taken from the brood nest. The comb is taken out and all the bees brushed off of it. The queen is then placed on the surface of the comb, and an opened cage with thin, sharp edges placed over her and pressed slightly into the comb, thus imprisoning the queen. The comb is then hung back in its place. The bees will generally cut her out and accept her while all is undisturbed and quiet in the hive. If they fail, however, to liberate her in forty-eight hours, the comb should be lifted out and a partial opening made with the point of a knife under the edge of the cage. The inquisitive little subjects will see the point, and will proceed to liberate the queen.

As a modification of the above methods, I make the sliding door of my cages so that they will project above the bottom, or, rather, the top, when the cage sets wire-cloth down, and let this projecting sliding door pass up through a slit made with the point of a knife in the quilt, so that I can draw it out and thus liberate the queen without the bees knowing it.

Christiansburg, Ky.

* * *

For the American Bee Journal.

Drones and Their Functions.

DR. J. R. BAKER.

While I read everything published in the columns of the BEE JOURNAL, every week, and have done so ever since its first issue, and while I feel that it is indispensable to me because of its scientific and practicable instruction on the different questions having a bearing on apiculture, I have wondered a good deal why, among all your able contributors like Messrs. Heddon, Dadant, Doolittle, Clarke, Demaree, and a host of others, that there seemed to be not one to dissent from the unreasonable theory that drones have no use in the economy of the hive but to impregnate the queens.

The comments of the editor of the BEE JOURNAL on the question: "Drones—Are they Auxiliaries?" and the extract he used in connection therewith from the *British Bee Journal*, which appeared in the AMERICAN BEE JOURNAL of June 28, seemed to me to be well timed. I have been skeptical on the seeming almost universal belief of the use of drones, for a long time; but my tongue refused to utter my thoughts, and my pen declared it was too feeble to enter the arena with those of the champions in the ranks of apiarists who adhere to the old notion that drones are simply dead-beat libertines.

It seems marvelous to me that nature should implant so strongly in the workers and queens the instinct to raise hundreds of drones in each colony if their only function is the impregnation of the few queens proportionately raised in any colony or any apiary; and that, too, when it requires only one drone to impregnate a queen and when once impregnated she is always so, as long as she is of use.

I hope Prof. Cook and other able men in our ranks will give the matter of the function of drones a "new hearing," for I verily believe that this big, jolly, musical inmate of the hive has been terribly slandered.

This has been rather a peculiar season in this latitude. A part of the time bees have just "boomed," and then the wet and cold would stop their work altogether. My bees are in better condition now than they were last year this time, and yet I harvested a large crop of comb honey last season. The weather has ceased to be cold, but it has been wet and cloudy without let up for near a week. I never saw so good a crop of white clover here as we have this summer, and when the sun shines for a few hours the bees gather honey very fast. We have a good deal of linden in this locality, and catnip, figwort, heartsease and numerous other honey-producing plants, the names of which I do not know, abound; but the champion of them all is the horsemint, *alias*, bee-mint, camphor weed, sandmint, wild bergamot, etc. It is one of the very best of yielders; lasts from 4 to 6 weeks, and the honey gathered from it is of superior quality. It commences to bloom from July 5th to 10th; grows on very sandy land, and literally covers our roadsides, commons, and uncultivated fields. I wonder if it is the same plant that the Texas bee-keepers speak of as so valuable with them?

Keithsburg, Ill.

London Journal of Horticulture.

Prolonging the Life of the Queen Bee.

DR. DZIERZON.

The celebrated physician Hufeland wrote a book on the art of prolonging human life. But if there can be a question of prolonging human life artificially, we might certainly expect to be able to prolong the life of bees, the more so as their term of life is attained under varying conditions and at different times of the season. While they exhaust their strength and die in about six weeks during the busiest time in spring and summer, bees reared late in the summer and in autumn look as strong and young on their first appearance in spring after six months' rest during autumn and winter as if they had only just left their cells. What is applicable to bees in general must equally apply to the principal bee in the hive—the queen, and to her I shall chiefly refer in discussing the question of the duration of life and the possibility of prolonging it.

This question is as interesting as it is of practical importance. The case of so small an insect as a queen bee, which leaves her cell at the end of 16 days, and might possibly be fertile and capable of propagating the species at the end of three weeks, to live to the age of four to five years or more, and to be able during this time to produce offspring to the number of about 1,500,000, has probably no parallel in the entire range of nature. The question as to the duration of the queen's life and the possibility of prolonging it is of a highly practical importance where the introduction of a new and superior race of bees depends on a valuable queen bee, obtained, perhaps, at considerable expense. When a bee-master has no isolated apiary it is difficult to keep a race pure until a considerable number of colonies have been formed, which send out drones in large numbers. A bee-keeper of no great experience will also find it difficult to determine with certainty whether the young queen of a colony has been impregnated by a drone of her own race, especially when races do not greatly differ in color.

In rearing queens, bee-masters, therefore, as a matter of precaution, will always fall back upon the brood from the parent colony in the second, and even, perhaps, in the third year, and are anxious of course to preserve the old queen as long as possible.

The question as to whether and how the life of a queen may be prolonged, was suggested to me by a dispute which had arisen between Miss Titz of Lasswitz, a great Silesian bee-keeper, and a bee-master by the name of St.

Miss Titz, on the occasion of the Neissen meeting, showed some friends who paid a visit to her apiary, in addition to a number of curious objects, an Italian queen bee, which she stated to be six years old, adding that she had succeeded in keeping this particularly pure and valuable queen alive so long by keeping her from excessive breeding. Mr. St. was of a different opinion, maintaining that there was no doubt a young queen had been raised unnoticed, as, according to his long experience, the life of an Italian queen never exceeded three years. He further asserted that the eggs became developed in the ovary of the queen and pass involuntarily, it being impossible for any influence to be exerted on the ovary.

In my opinion Mr. St. is wrong on both points. Although six years and one month is certainly an unusually great age for a queen bee, it is not by any means impossible and incredible that she might attain that age.

Some years ago I myself had a queen which, though more than five years old, was still very active, and I have no doubt would have lived another year if I had not destroyed her. Sig. Hruschka assured me that he had had a queen which lived to the age of seven years. It appears, therefore, quite credible that the queen referred to lived to the age of six years, the more so as she was a fine and vigorous specimen, and was carefully kept from over-exerting herself.

There is no doubt whatever that it is feasible and in the power of the bee-keeper at one time to stimulate the queen to excessive breeding, and at another time to induce her to deposit few eggs or none at all. By keeping the entire colony quiet in spring as long as possible, premature breeding is prevented, and the queen does not waste her strength.

When once she has commenced laying eggs she knows perfectly well how to accommodate herself to circumstances and the requirements of the colony as regards the number of eggs to be deposited. According to the quantity and quality of the food she has taken she produces and deposits as many eggs as the colony is capable of attending to. It is certain that the queen is also able to keep a mature egg back in the ovary for some time without injury to herself or to the egg, as she is often obliged to examine a number of cells before she finds one that is empty and suitable, and in which she deposits the eggs, which undoubtedly would have been deposited into the first cell examined by the queen if she had found it empty and otherwise suitable. A much larger number of eggs will therefore in the same time be deposited in an empty comb inserted into the brood nest, because on an empty comb she can pass from cell to cell, there being no need for her to examine any cell nor to pass any over. A comb containing 6,000 cells is often found full of eggs at the end of two days, which shows that a vigorous queen is capable of laying as many as 3,000 eggs a day. We might be inclined to consider that the queen was over-exerting herself at that rate, and in a certain sense we should be correct; but we must not for a moment suppose that such productiveness would fatigue or inconvenience the queen. She evidently discharges with energy and pleasure her duty to increase the population of her hive as much as possible, and the less hindrance she experiences in doing so the better she will be. The most vigorous queens, therefore, are always to be found in the largest colonies, where of course the number of eggs deposited is largest. Where the queen is obliged to discontinue laying eggs on account of the stock having but a small population fatal consequences seem to result.

In former years before the Italian bees had become acclimatized, which has now been fully accomplished after 29 years' manipulation, I frequently experienced the loss of Italian queens in weak colonies after they had commenced depositing eggs in spring, but were compelled to discontinue on a sudden change in the weather, because the bees were obliged to crowd together again into a thick cluster. The abdomen of the queen in such cases being found very much distended, the conclusion was forced upon me that the impossibility of depositing the eggs formed in the ovary had proved fatal to the queens.

This unpleasant occurrence has never happened in any of my strong colonies, undoubtedly because the queen was always able to deposit eggs regularly, even during cold weather. But the fact that queens in strong colonies are always in first-rate condition at the time of their greatest prolificness does not exclude the possibility, or even probability, of their becoming exhausted sooner, or dying prematurely. Professional physiologists alone will be able to answer the question as to whether a queen bee is only capable of laying a definite number of eggs, or whether eggs are produced indefinitely as long as the vital power of the queen lasts. Practically it might perhaps be decided by ascertaining how long the queen lives in Australia, where she lays eggs continuously, because nature produces flowers there without interruption throughout the year; and how long she lives in our own country, where the activity of the bees, and consequently the activity of the queen, is dormant for about five months of the year.

No bee-master is likely to think of economising the strength of ordinary queens. Every one is anxious that the workers should be as industrious and the queen as prolific as possible. But if it is a matter of keeping some especially valuable queens alive as long as possible, and the question arises as to whether it is possible to prolong their life artificially, we are obliged to answer in the affirmative.

Carlsmarkt, Germany, Feb. 22, 1882.

For the American Bee Journal.

How to Fasten Foundation, etc.

J. V. CALDWELL.

The utility of comb foundation depends to a large degree on the way it is fastened in the frames and honey boxes. I have not yet noticed any plan I like as well as the one I have been using the past two seasons, and which, if the directions are followed just as I give them, will be satisfactory to the user.

Go to your blacksmith and get him to make you a pair of good strong tongs, not too heavy or they will be hard to handle, and yet heavy enough to insure a good grip. The ends or gripping part should be made in the form of a T, and should be about four inches long on the gripping end. I have them made long enough to go inside of the 1-lb section. They should have on the ends two screw holes, that is, two on each side to take about ⅝ inch screws. These tongs are to have wooden jaws. Take two pieces of hard wood as long as the jaws, and about ⅜ inch thick, by 1¼ inches wide, and having made them smooth screw them on the inside of the jaws of the tongs. Your tongs must be made wide enough to take these in and have them pinch tight on the ends. The pinching parts should be rounded a little to prevent cutting the wax.

Now, then, to use, get out a block as large as your section inside, and ⅞ inch thick, this is supposing your section is 2 inches wide, tack this block on your bench, lay your section over it, and you are ready to begin work. Lay your section with top side toward you, lay in your foundation with the edge next to you turned up about ¼ inch; it should be quite warm so it will mash to the wood. Your tongs must be kept setting in some soft water to prevent them from sticking and pulling the foundation loose.

Set your tongs in the section and pinch hard and your work is done. I should say also your block in the section must be kept wet, but do not get any water on the part of the section you are fastening foundation to. I use these pincers to fasten the heavy foundation in the brood frames; in this case have your board to go inside of the frame made as large as the inside measure of the frame and ⅜ inch thick, or a little thicker if your frame is a full inch wide. Fasten the board down and lay your frame over it; lay in your sheet of foundation with the edge next you turned up as before; the ends, also, should be turned up against the end bars of the frame ¼ inch; press down neatly all around, take one grasp with the pincers on the middle of the top-bar, then pinch on the end bars, then push on top-bar, lift the frame out, and if you have the job properly done, your sheet will hang perfectly true and straight, and cannot be pulled loose without tearing the foundation. If your pincers get sticky, use a little lye in the water.

Mr. Heddon has seen fit to denominate the Dunham machine as one of the difficult ones to use, claiming it to be a very sticky machine. Well, I must say he is either somewhat prejudiced, or does not quite understand using it. I say the Dunham is as easy to use as a common clothes wringer, provided, of course, you know how to make good foundation. We think nothing of running all day without spoiling a single sheet, and all perfect, well printed sheets. I think Mr. Heddon said about 75 lbs. was all 2 hands could print on the Dunham in one day. Well, my partner and myself ran through 150 lbs. in one day, and I went to the village, about a mile away, in the bargain.

On the Vandervort machine, on account of the sheets being narrower and very thin, we consider 50 lbs. a day's work. This of course, does not include the dipping of the sheets, which would make another article; but I will only say we dip by a plan far more speedy than any of the plans yet given.

Cambridge, Ill.

Our Home Science Gossip.

The History and Antiquity of the Bee.

A. F. MOON.

The magnitude of scientific apiculture possesses a national life.

Were we to go back no further than the last century and show the wonderful developments made in this one branch, its profits, incomes, and the immense increase of colonies, and the revenue that it brings to this country, it would by far excel any other rural branch in point of profit from the capital invested.

The history and workings of the honey-bee are wonderful indeed, affording man a great and beautiful study, as well as a good income for the time and labor given. From historical facts we are led to believe that the honey-bee has been a companion of man from the earliest civilization. Ancient records speak of them and their existence on the islands and coasts of the Mediterranean, also on the Black Seas. They were kept largely in the interior of the continents of Europe, Asia, and Africa. We learn from the military expeditions of the ancients, that they were by them kept, and extended into Egypt, Syria, Italy, Germany, Greece, Sicily, and other countries. They are spoken of as being indigenous to those countries, and in no one instance have we seen in the annals of antiquity that the honey bee has been transferred from one country to another by human intervention or instrumentality.

Scientists have given this one subject deep thought. They have been able to trace the little busy bee far back in the dim dawnings of history, particularly in the era of the "Sagas." We are assured of the existence of the honey bee and its fruit as being so invigorating. The bee marked the golden age in the mythology of the Egyptians, Greeks, and Romans, and not only with these did the honey bee occupy a very distinguished place, but it is significant of the intimate relations which must have existed at one period between the earliest civilized nations, and we find that it was the common faith of these people that the honey bee originated from the putrefying carcasses of oxen, and that the name of the Sacred Bull of the Egyptians is perpetuated in the Latin word apis.

The first traces of bee culture are found almost everywhere back in the Saga periods. Thus in Spain the Curetes dwelling near Tartess ascribed the invention of the art of procuring honey to their ancient fabulous King Gargoris, while the Greeks and Romans attributed this merit, as well as that of first placing bees in prepared habitations, and domesticating them, to their gods or the descendants of their fancied deities.

Farther back in prehistoric times, from which no written records, names or dates survive, there remain weapons, implements, and building materials, garments, and personal and beautiful ornaments, human bones, and many other things, all furnishing proof of civilization among the inhabitants, also unmistakable evidences or indications that the honey bee was largely cultivated. It is claimed that further back in the abyss of time, in those remote eras in the progress of the development of the earth, which preceded the elevation of the Alps, the various remains of fossil organisms, demonstrate the fact that a tropical climate once prevailed in what is now called Switzerland.

Petrified remains of various plants and insects, the enemies of bees and other things belonging to the animal kingdom, also a fossil honey was found. This occurred in the insect bearing stratum of the quarries of Oeningen; it was recognized by some of the professors as an apis, establishing the fact that the honey bee existed geologically as an inhabitant of our earth ages before the appearance of man, no doubt living in peace and harmony with their mother queen, guarding and protecting their stores, laying up their food for a time when needed. Unlike many other things, no change has been made. They work without rules, plumbs, or guides. Since our first written history of the bee, its progress has been remarkable. Indeed Aristotle, Cato, Virgil, Pliny, Columella, and many more, wrote interesting accounts of the honey bee, of its cleanliness and activity, economy, etc.

Honey was spoken of as the food of the ancients; the tables of Romans, Grecians, and Persians were richly supplied with honey. History informs us that the Romans and Grecians brought honey as an offering to their gods, and the animals that were sacrificed were sprinkled with honey. The Israelites showed the wealth of the land of Canaan by declaring that it flowed with milk and honey.

We gather many interesting facts from the ancient apiarists' artificial queen having extended herself throughout upper Lasaita, Bohemia, Bavaria, Silesia, and other portions of Germany. Even Poland engaged in the business. Wheeler's "Journey into Greece" is quite interesting, describing their method of keeping their hives, which were made principally of willows. Wildman's account of bees, 1768, which was copied from a journey into Greece, affords many interesting facts connected with both bees and honey. When we trace this wonderful insect down to the present time, counting her millions of revenue to this country, we are forced to the conclusion that apiculture possesses a "national life." It is truly a great enterprise; world-wide in its branches; one of the grandest fields of industry that philosophers have ever entered. No one nation can ever enjoy it alone.

Rome, Ga.

For the American Bee Journal.

The Barberry Shrub Again.

PROF. T. J. BURRILL.

I have read with interest Mr. Maxwell's remarks in the BEE JOURNAL of June 28th, concerning the barberry and a disease of his peach trees. Now, it so happens that this peach tree disease is well known to me (see Transactions Illinois State Horticultural Society, 1878, page 157), as is the literature upon the subject of the rust of wheat and the barberry. While there is good reason to suppose that the fungus known as wheat rust (*Puccinia graminis*) does pass a kind of alternation of growth at times on the barberry, there is nothing but Mr. Maxwell's observation to connect this or any other fungus inhabiting the bush in question with that causing the disease mentioned of the peach tree. Further, the fungus which covers the peach leaves "with a sort of mildew," and causes them to become "turned white, and crimped and twisted," with "a leprous appearance," lives only on the peach tree, undergoing there its full development. It is a perennial parasite, but developes more or less on a tree once affected according to internal and external conditions.

I am so certain about this that I do not hesitate to say Mr. Maxwell's facts must be explained in some other way, and my certainty comes from a rather intimate acquaintance with the objects themselves, not from botanical reading.

As to wheat rust from the spores of a parasitic fungus on the barberry, a careful German investigator believed he had full proofs in the affirmative, but it is not hard to state that the wheat rust fungus in our country is capable of undergoing complete development without the barberry.

Some recent experiments also throw doubt as to whether there is, after all, any real connection between the two. Such things need a good microscope and a pains-taking manipulatior of it.

Illinois Industrial University.

Translated from Bienenzeitung by A. Neighbour.

International Congress at Milan, Italy.

DR. FRIEDRICH KUHL.

The congress took place in the splendidly decorated hall of the Technical Institute, No. 4, Piazza Cavour, on the 15th, 16th and 17th September last, and was attended by about 300 bee-keepers. The transactions at Milan did not commence until 8 o'clock in the evening, continuing till after midnight, while the day time was occupied in visiting the Grand National Exhibition and the objects of interest in the city, and in making excursions into the surrounding lovely country, and visiting a few of the largest apiaries.

Mr. Edward Bertrand, editor of *L'Apiculteur*, Nyon, Switzerland, commenced his very interesting discourse on "breeding queens" by saying that this was a particularly fit subject of discussion for the Congress, Italy being the country from which beautiful queens are dispatched to all parts of the world. The rearing of queens for export, he continued, had become quite a branch of industry in Italy, and the Italian bee-masters ought to endeavor to maintain the good name of their queens; it would further be necessary, he remarked, that those who procure queens for a foreign country should be fully convinced that the queens they receive from Italy really possess all the good qualities which will secure pure offspring. He had unfortunately experienced in the last few years that some queens which he had obtained from Italy died in the first year, while other queens turned out not to be very prolific, so that their colonies yielded but poor returns. He added that similar complaints had been made in Germany and America, and many bee-keepers, therefore, justly preferred those queens of the Italian race which had not been reared in Italy.

Mr. Bertrand considers it very important, in order to rear serviceable queens, that—1. The parents, both queens and drones, should be selected. 2. There should be a large number of young bees in the hives used for breeding, because young bees are very apt to supply the larvæ with plenty of food. 3. There should be a large population in a colony in which queens are to be reared. He objects to queen-breeding in small colonies, because it would produce queens of a weak constitution, which on this account would not be very fertile. While on this subject the speaker mentioned that in Germany the great masters of bee-keeping, Dr. Dzierzon, Gravenhorst, and Dathe, first allow the royal cells to be sealed in colonies with large populations, and afterwards proceed to make small colonies in which to allow the queens to hatch. 4. The queen should only be allowed to breed during the time when the bees are able to obtain a good supply of honey. He and other bee-masters of his acquaintance had frequently observed that queens reared early in spring or in autumn deposited but few eggs and often died after the first year. He did not believe that feeding was a remedy in the absence of the other conditions, viz: warm weather and a plentiful supply of pollen. 5. Those larvæ which are chosen by the workers for rearing queens should not be more than a day old, in order that they may receive a plentiful supply of royal jelly as long as possible.

The discourse, which lasted over an hour, was followed by a debate of considerable length. I will only mention that Count Barbo expressed the opinion that Italian queens sent to foreign countries often do not give the desired results because of the frequently great difference in the climate and vegetation as compared with Italy. Prof. Sartori observed that Italian queens formerly brought a very good price in foreign countries, but their present market value was so low that breeders in Italy could no longer give the same careful attention to the rearing of queens they had formerly done.

Dr. Dubini was of opinion that in order to obtain good queens in future it is only necessary to let the number of young bees be in the right proportion to the brood that has to be attended to, and that queens may, without disadvantage, be reared by small colonies if the latter are allowed to have but a small number of brood cells. Prof. Sartori expressed himself in the same sense. Count Barbo proposed that a few queens partly reared in large colonies and partly by small communities, should be sent to Mr. Bertrand by the Italian Central Association of Bee-Keepers, and that he should be requested to note any differences as to vigor and fertility of the queens to be forwarded to him. Mr. Bertrand accepted this offer on condition that the queens to be sent to him should merely be numbered in order that he himself might not know which of them had been reared in large hives and which in small ones.

Mr. Bertrand read a letter from Mr. Newman, the editor of the AMERICAN BEE JOURNAL of Chicago, in which the latter requests the Italian bee-keepers to devote the greatest care to the rearing of queens.

The reading of this paper was followed by a discussion, during which Mr. F. Lancia de Broto, of Palermo, mentioned that the Sicilian bees, being a cross between the Ligurian and Egyptian races, deserve particular notice on account of their many good qualities.

Dr. Dubini spoke on the subject of hives with movable and immovable crownboards, and came to the conclusion that bees are quite as comfortable in the former as in the latter, in proof of which he referred to the American, English and Swiss bee-keepers, who use chiefly hives with movable crownboard. In Italy, he said, the majority of hives were certainly made after the model of Baron von Berlepsch; still Dubini hives with immovable crownboard were also very much used.

Count Barbo reminded the meeting that the German bee-keepers had almost entirely discontinued using hives with movable crownboard, because they found that these hives did not retain the heat so well as hives with fixed crownboard, and that breeding in them did not progress so rapidly.

Dr. Bianchetti recommended a hive of his own construction with movable floorboard and crownboard.

Several speakers expressed themselves against hives with movable crownboard, chiefly because they were of opinion that the chilling of the brood, especially in spring, might easily cause foul brood.

Mr. Marengi, of Bergamo, introduced the question, "Is it possible that combs which have been subjected to the fumes of brimstone may originate foul brood?" He related it had been observed in different apiaries that combs which had been exposed to the fumes of brimstone, and were afterwards given to healthy colonies, had, later in the season, contained cells infected with foul brood, while the brood in other combs not subjected to fumigation by brimstone which were inserted at the same time had remained in a healthy state. Mr. Locatelli, pharmaceutical chemist, did not think that exposure of the combs to the fumes of sulphur would cause foul brood, sulphurous acid being a disinfectant. He stated that he was in the habit of subjecting all his combs to the fumes of sulphur, and had never found it do any harm.

Before the meeting separated a committee was appointed to draw up a report as to the best means of improving the management of bees in Italy, and of gradually putting an end to the objectionable practice of killing bees by brimstone. The next Italian congress is to be held at Bologna in 1884.

Germany.

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

July 25—Western Iowa, at Winterset, Iowa.
Henry Wallace, Sec., Winterset, Iowa.
Aug. 10—Maine State, at Harmony, Maine.
Wm. Hoyt, Sec.
Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.
Oct. 3-6—North American, at Cincinnati, O.
Dr. Ehrick Parmly, Sec., New York City.
5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.
Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Alsacian Bienen Zeuchter.

Italian Bees as Robbers.

The following discussion on this subject took place at the late meeting of the "Societe d'Apiculteur d'Alsace-Lorrain:"

Mr. Bauer said: Heretofore I have not kept Italian bees, owing to their propensity for robbing, but as I am now the only apiarist in our village, and consequently no one else would suffer from them, I shall commence Italianizing my apiary next spring. Will I have trouble with them, for the reason I have mentioned?

Mr. Zwilling—The instinct to gather honey, which the Creator has given every race of bees, induces them to nibble and rob whenever they find an opportunity either by the neglect of the apiculturist, irregular feeding, or queenless colonies. The Italian bee possesses a greater instinct to gather honey than the inferior races of bees, and consequently an increased desire to rob. But it does not follow that no other race of bees could exist in their immediate vicinity without being robbed by them. For more than 10 years I have kept Italian and black bees in the same apiary, and have never discovered the Italians robbing their neighbors.

Mr. Bauer—Aside from the desire to rob, the Italian bee is said to possess other bad qualities, and in spring the superseding of queens becomes an epidemic.

Mr. Zwilling—I have discovered no greater mortality among my Italian queens than any others. We often hear the complaints of beginners, that their yellow queens are dead, and that they will hereafter keep only the Germans. This usually happens through mismanagement of the apiarist, and is not the fault of the bees. It is a fact that some beginners open their hives as early as February, and pull out comb after comb for the purpose of investigation, and by this careless exposure the queens are often destroyed, or the worker bees may have too closely surrounded the queen and smothered her.

Mr. Bauer—Is it true that the Italians get foul brood easier than other races?

Mr. Zwilling—It is very often said that foul brood does not exist in Italy at all. Foul brood germinates in weak colonies, where the numbers are insufficient to keep the brood warm. This happens frequently among the Italian bees, where the apiarist devotes his attention to the rearing of queens instead of worker brood.

Mr. Bauer—Does the Italian go into winter quarters in a weaker condition, and therefore sustains greater loss than any other race?

Mr. Zwilling—In countries where the autumn bloom is very limited, they will stop breeding earlier than the Germans, and, consequently, will not be as strong, but where there is plenty of late bloom, they winter equally well with any other race of bees. To those who keep bees for increase, I would recommend the Krainer bees. These queens are very prolific, and will continue breeding even during a scarcity of bloom, but the stores of honey suffer in consequence.

SELECTIONS FROM OUR LETTER BOX

A Bee House.—Our bees came out all right this spring. We have had one new swarm up to this time. One came out and settled in a large tree; we got them down and hived them, and when putting them in their place they all came out and went back to the old hive. Do not know the reason, unless they did not have a queen. They have just begun to work in the boxes, and are very strong. I think it is owing to the weather, which has been muggy and rainy that they do not swarm. We had a heavy rain last week which spoiled all the corn on the bottom lands; with that exception the crops are looking fine. Clover is abundant here, and lots of basswood, and I cannot see why the honey harvest will not be good this year. No bees around here only my 14 colonies. The following is a description of our bee houses summer and winter. Our winter house is 16 feet long by 9 wide and 8 high, frame, like any house, only ceiled up inside with 1 inch matched boards, under that building-paper and then the siding, which leaves an almost dead-air space. The floor is of common boards, then paper, then flooring; the top is ceiled, papered, and roofed, leaving a ventilator. Our summer bee house is simply a long shed 5 feet in front, 4 behind, and boarded up and lathed, with a row of grape vines 5 feet high in front, running on wires. We use our winter bee house for a shop.

S. T. Woolworth.
Gratiot, Wis., June 30, 1882.

Honey from Red Clover.—My bees are now gathering honey from white and red clover. From appearances, they are doing as well on the latter as on the former. O. H. Townsend.
Kalamazoo, Mich., July 3, 1882.

Deserted the Hive.—I had a swarm come out four days ago; I clipped the queen's wing, but forgot to put the cloth over the frames. I looked in yesterday and found the bees in the top of the hive, and building comb from the peak of the roof. I removed the bees and comb from the roof, and put on the cloth. Instead of going into the hive, the bees swarmed out and clustered in a tree, but soon came back into the hive. I found to-day that most of the bees had left and gone into another hive, not the parent colony. The clipped queen and a handful of bees remained in the hive. The forsaken hive had been painted about 10 days. What is the trouble, and what should be done? Please answer in the BEE JOURNAL.

CLARK A. MONTAGUE.

Traverse City, Mich., June 29, 1882.

[The trouble originated in removing the comb after the queen had deposited eggs in it. Had you given them a frame of brood and eggs after removing them from the roof, most likely they would have remained. There is no remedy now but to strengthen the few remaining bees with hatching brood from the parent colony, if you wish to preserve the queen, or return her whence she came.—ED.]

Subjects Anticipated.—I have been looking for a change in the weather. It rains every other day, and to make up for the dry day it rains twice the next, so the bees have but little time to work, and what honey is secreted is washed out by the heavy rains. We had a storm June 29, uprooting trees, blowing down barns, etc. The prospect is gloomy here—gloomy indeed. My bees have caught the swarming fever, notwithstanding the rain, and have increased from 33 to 74. I selected several subjects to write on, but when I get a new JOURNAL I find each subject discussed to my satisfaction, and much better than I could have done. I bid the BEE JOURNAL God speed in its onward career. G. W. ASHBY.

Valley Station, Ky., June 30, 1882.

Doing Better.—Bees are doing better since I last reported; swarming has begun in earnest. I extracted the first honey to-day. Owing to so much wet weather, the honey is very watery and thin. I never saw white clover so full of bloom. If the rains and cloudy weather would cease, I think the honey flow would be enormous. W. H. GRAVES.

Duncan, Ill., June 30, 1882.

A Hard Season.—I send you by this mail a sprig of flowers and a leaf from a tree which grows in my yard, and the only leaf or tree of the kind that I remember ever having seen. It has an army of flowers; many of the sprigs are 20 inches long, and the bunch of them together is enormous. I am very anxious to know what this tree is, as my bees live on it from morning till night. I am a great lover of bees, though I know but little about them. I have 5 colonies in Langstroth hives, which are quite a curiosity in this county, as there are none of them here with us. The season is a very hard one to the industrious little pets. Mine are storing but little honey. Long life to the BEE JOURNAL. It is a perfect gem to a lover of bees.

J. C. WILSON.

Ridgeland, S. C., June 27, 1882.

[This beautiful tree is a native of China or Japan, in both of which countries it is now grown for shade and ornament. It is sparingly cultivated in several localities of our Southern States, but probably is not hardy at the North. Linnæus named the trees Sterculia platanifolia, from the resemblance of its leaves to those of the sycamore or plane tree, mostly on account of their large size. As a honey plant it is interesting to note that it is a near relative of the linden or basswood, everywhere so well known for the abundance and fine quality of its nectar, as well as for the delightful fragrance of its flowers. It is worth while, also, to bear in mind that there is an intimate connection between fragrance, nectar, and insects. Bees evidently possess a decided sense of smell and may thus be able to find a linden in full bloom from a considerable distance. I do not know, but, from the appearance of the flower and the nectar it produces, I hazard the inference that this Sterculia is, when in bloom, highly scented. Perhaps, after all, it is not so much of a hazard, for Sterculius was the name of a Roman god, so called (from stercus, manure) because he taught the agriculturists the use of manure. In this case, we may suppose Linnæus had before him a species of the genus not noted for the pleasantness of its odor, though the latter may have been sufficiently pronounced.

The structure of the flower of this, in so many ways peculiar, tree is evidently marvellously adapted to the visits of insects and their work in cross fertilization. The nectar at the bottom of the calyx-cup is protected from small insects by a dense plush of hairs, so that such insects as might creep under without touching the pollen bearers, and so plunder the sweet store without recompense to the plant, are efficiently excluded, while a larger, long-tongued guest is privileged to help itself (herself?) by pushing aside the fringe of short, matted hairs. The stamens and pistil are borne on a peculiar and altogether uncommon prolongation of the axis or stem rising well above the nectiferous cup of the calyx. The pollen sacs themselves (anthers) are densely crowded upon the upper or outer end of this prolonged axis, which is itself here shaped into a cup at the bottom of which the five-parted pistil is found. Here again I cannot be sure from the specimen at hand, but there probably is secreted in this second cup enticing nectar, hid away and hardly accessible to many insects, though quite so to some invited favorites. To get it, however, an insect's proboscis must be effectually smeared with the adhesive pollen, to be carried away to another flower.

Has any attention been heretofore given to the Sterculia as a honey producer?—T. J. BURRILL.

It has not, that we are aware of.—ED.]

Doing Excellently.—The honey yield is good here this season. I have taken 134 lbs. of comb honey, in one-pound boxes up to this date. If the season continues as favorable as it has been the past six weeks, I will get over 300 lbs. of comb honey per colony. W. S. CAUTHEN.

Pleasant Hill, S. C., June 24, 1882.

From a Beginner.—I have taken the BEE JOURNAL for 6 months, and have obtained some valuable information from it. My father has had bees for 3 years before this, but kept them in boxes, nail kegs, or anything that came handy, sometimes getting a little honey, and sometimes none. Last fall he brimstoned the bees in a nail keg, which I think was a cruel way to get honey, and it was a poor lot indeed, which set me to thinking there was a better way. I subscribed for the BEE JOURNAL, and now have 8 colonies in frame hives, from 4 old colonies in box hives. The first swarm came on May 20, during apple blooming. The first came out just before noon. I got them down from where they had clustered, and they were going into the hive nicely when another swarm came out and went in with them, filling the hive full; the next day I put on the sections to give them room, but soon found that would not do; one of the queens went up in them and went to laying. I captured her and put her with 3 of the frames and adhering bees in another hive. Bees have been doing well on white clover, of which there is any amount here. I have taken off some sections from the first colony, and more will be ready in 3 or 4 days, while the old colonies have not commenced storing surplus yet, they having swarmed too much. The weather has been very favorable here for bees the past two weeks. We have had showers occasionally to keep pasture in good condition. 1. Where can I get barberry seed, and at what price? 2. What kind of a plant is it in size, and where should the seed be sown ? 3. What is first quality basswood lumber, suitable for making hives, worth, sawed right thickness and at the saw-mill ? ALFRED GANDER.

Adrian, Mich., June 30, 1882.

[1 and 2. Some horticulturist will probably give you all the information desired regarding barberry shrubs.

3. We cannot give a definite answer. Write to any lumber dealer, giving dimensions of what you want, and quantity. We cannot recommend basswood for hives—pine and poplar or white-wood are better.—ED.]

Motherwort.—Inclosed find a plant on which my bees are working from early morning till late in the evening. It must contain a great deal of nectar, judging from the way they work on it. This is the only stalk in the neighborhood that I noticed. Please name it. Bees are doing splendidly on white clover, and basswood is opening a new field for them. I have counted 198 trees within half a mile of my apiary, and all full of buds just beginning to open. The heavy rains this spring and summer kept the bees back some, but now they are making up lost time. We had a storm accompanied with hail and rain, that damaged the crops a great deal, prostrating the grain and clover on the ground. No such storm has been known in this place.

JOHN W. STURWOLD.

Haymond, Ind., June 27, 1882.

ANOTHER.—I herewith inclose a piece of spike from a plant to ascertain the name. The spikes grow about a foot or more long, and are in bloom all summer into fall. The plant grows 4 to 5 feet high, and has very many branches covered with these spikes, and is the best honey plant I ever saw. It was brought here from Pennsylvania by Mr. Musgrave. who found it wild and scarce. Bees are doing well in this locality. There will be considerable buckwheat in bloom in a week or two.

J. S. MCALLISTER.

Columbus, Neb., July 3, 1882.

[The plants referred to are motherwort. It is needless for us to repeat that it is a most excellent honey plant, and worthy of more attention than it generally receives.—ED.]

Prospect Excellent.—I had 70 colonies this spring to commence with, all in good condition, with boxes on them all, nearly completed, and only awaiting capping, but no swarms yet, nor do I want any for 10 days yet. I never saw a season any better than the present one. White clover is abundant everywhere, and the bees are working on red clover just as much as they do on white clover. I hope all bee-keepers will try and keep the price of honey up, so that we can make up for what we lost last year.

F. G. KINNEY.

Bristol, Ind., June 30, 1882.

Captured While Laying. — I send herewith a fertile worker. On May 6th I removed from a vigorous Italian colony 4 frames of brood for the purpose of rearing some queens. The weather not being favorable, they produced but 3 cells, whereas they should have built 6 or 8. On the 10th day, or the 16th, we found two cells that contained young queens, and one empty cell ; removed the two cells containing queens, destroying one that did not appear perfect, and placed the other in a nucleus. This hatched and proved to be a fine queen. After satisfying ourselves that the colony was still without a queen, and that the empty cell had never been occupied, we gave them a frame of brood filled with eggs and larvæ. I examined them on the second day, but found no evidence of queen cells. The eggs are hatched and the brood finely capped over. Making several careful searches for the cause of this strange behavior, our labor was rewarded on the 21st of June by finding this fertile worker in the very act of laying. She had deposited eggs in one comb over a space of about 4 inches, in worker cells. The bees are now extending the cells out, or making drone comb of them. The bees showed her the same respect by turning their heads to her and making room for her over the comb. She showed all the peculiarities of a young queen—frisky, etc. The prospect for a good honey season in this section is very discouraging ; too much rain. I have extracted 3 gallons from 5 colonies. Can hardly get bees to start queen cells. W. A. BRADFORD.

Butler, Ky., June 26, 1882.

[The fertile worker and attendant bees arrived safely. With the exception of a more tapering waist, and more glossy abdomen, we would not have recognized her from the other bees, had her wing not been clipped. In nearly every Italian colony there are plenty of old bees presenting all the characteristics of this one. We give on page 444 of this issue, a very interesting letter from Mr. P. L. Viallon, relating to fertile workers, and Prof. Cook's instructive dissection and examination of the same with the microscope.—ED.]

Bees are Doing Finely.—Bees are doing finely here this season. I have just taken off 48 pounds each from some of my best colonies, white clover honey, stored in one-pound sections of the Forncrook style. Take the season so far, I think it ahead of any for several years for honey gathering. E. W. WALES.

Disco, Mich.

Cold Wave.—This last wave of cold has stopped the clover honey flow ; basswood is not yet in bloom, but will be in a few days. It is a pretty poor season here, so far.

JAMES HEDDON.

Dowagiac, Mich., July 5, 1882.

A New Clover.—Enclosed find stalks and flowers of a plant, which please give name and value as a honey plant; also, if good as forage for cattle. The plant grows and looks like Alsike clover, the blossom is pure white, resembling white clover, excepting much larger than either Alsike or white clover. It is evidently a variety of clover, but have never seen any of it before. It is in bloom considerably earlier than white clover. I found it growing in a field, but cannot account for its appearance there. Answer in BEE JOURNAL.

Altamont, Ill. JERRY THOMAS.

[A similar specimen, but not so large, was sent us last week by H. Besse. Delaware, O., see page 427. As the Alsike clover itself is said to be a hybrid, matured and fixed in Sweden, so these specimens may be of the same character, and this is more than probable, from the fact that Mr. Besse's is reproducing itself, and extending its area. As to its value for pasturage we cannot speak positively, but can see no reason why it should not be desirable, perhaps very superior. At all events, you owe it to yourself, as well as to community, to extend its cultivation till satisfied of its worth. It may, possibly, in the future, revolutionize our pasturage for cattle, sheep, etc., and our forage for bees. Certainly, its earliness of bloom will be a great recommendation of itself, if it should prove adapted to the bees.—ED.]

Honey Prospects in Ohio.—Bees in this vicinity have done but little in the way of honey gathering, until within a few days. Prospects for swarming are greater than for several years, even after being somewhat lessened by the damage done to fruit bloom in early spring. Many impoverished colonies were lost during the cold spell, but those that were properly fed, or lived through on their own stores, are likely to pay a good profit at the end of the season.

R. A. MOLLYNEAUX.

New Richmond, O., June 29, 1882.

Not One Pound Yet. — Bees are strong ; swarming profuse ; no honey; not one pound taken yet ; weather very warm ; lots of rain ; linden just in bloom ; fear we will have no harvest, but living in hope that the bees will fill up for winter. My bees have never worked a whole day since last April ; hope somebody will get some honey. C. H. DEANE.

Mortonsville, Ky., June 27, 1882.

Mercury at 50°.—Bees are doing well on white clover. Mercury was down to 50° on the evening of the 1st inst. Weather has been quite favorable for about 3 weeks.

E. N. LLOYD.

Fayette, O., July 3, 1882.

A Curious Circumstance.—Yesterday evening I was examining a nucleus containing fertile workers, and while holding the comb in my hands looking at several workers laying, they all—bees and all—at once flew off, and after flying a few minutes in the air, they settled on a plum tree close by. In fear that they would not return, I took the same comb and hung it against the cluster. I had hardly done that when they all ran on the comb and the fertile workers went to laying in a few moments. I counted as many as 15 laying at the same time, and others performing the same operation in their turn. After catching 8 or 10 and pressing their abdomens, I had 4 to show the egg, and in fear that I might lose the opportunity, I sent one of my assistants, who was present, to my drug store for a vial of alcohol, and on his return I caught several in the act of laying and put them in the alcohol. I send them to you by this mail. This is almost incredible, but it is the fact, and I am glad I had an eye witness. I intend bringing two bee-keepers of the neighborhood, in a day or two, to show them the workers laying while holding the comb in hand. My opinion is that every bee in that nucleus is capable of laying, as I saw at least 50 of them laying, and others simulating the act. I am almost inclined to send you that nucleus by express, at my expense, but will not confinement destroy their propensity of laying? What do you say? I trust that this may be of some interest to you, and hope to hear of the result of your examination of these fertile workers. I ought to mention that there are but about ½ pint of bees in the nucleus.

PAUL L. VIALLON.
Bayou Goula, La.

[The above is very interesting. The bees sent were no way peculiar, except that some of them had very large but rather short abdomens. I have carefully dissected six of them. In all I find eggs. The ovaries instead of being multi-tubular as are the same in the normal queens, have only two or three tubes, and the eggs instead of being indefinite in number, are so few that it would be an easy matter to count them. There was no sign of a spermatheca, and the poison sack was large, as in the workers, and not as in the queens.—A. J. COOK.]

A Failure.—My bee business is almost an entire failure this season.

R. WILKIN.
San Buenaventura, Cal.

Not so Bright.—I see by last week's BEE JOURNAL, you say prospects are brighter. Not as far as my apiary of 100 colonies is concerned. White clover here is scanty, small and no honey in it; bees killing off drones and scarcely gathering enough to live on. In fact, there has been no honey comparatively in fruit bloom, locust, or willow. Two rainy days would starve ¾ of my colonies. Let us hear from other points of Canada.

J. C. THOM, M. D.
Streetsville, Canada, June 29, 1882.

Foundation Making.—1. Would it be advisable for a man with 65 colonies of bees to invest in a foundation machine? 2. What hive would you recommend? 3. Can an apiary be run to advantage without foundation? I find it difficult to get bees to build straight on the combs.

JOHN SHERRETTS.
Norfolk, Oregon.

[1. With the present spirited competition in manufacturing and selling foundation, we do not think it would be advisable to invest in a first class machine, even with more than 65 colonies. Many propose to work up wax at 10 to 15c. per lb.

2. At present we would recommend the Langstroth hive, and until a standard frame is adopted. There may be other hives just as good, or perhaps, a trifle better; but we will recommend it because it is quite as capable as any of all desirable manipulations.

3. It cannot. If the apiarist has a surplus of nice, straight combs sufficient to meet emergencies, then he can dispense with foundation; but, otherwise, he loses half the utility of his movable frames unless foundation be used. Again, no loss is entailed in the purchase of good foundation, even at a higher price than it is now selling, because with it a prime swarm can fill a 10-frame Langstroth hive with nice, straight combs in 48 hours, and make good headway in storing honey in it.—ED.]

Working in the Sections.—My bees are doing finely at this time. A swarm that issued May 8th, has on 40 one-pound sections. I took a peep at them this evening, and found they have several nearly filled, and most of the others started. I think this is doing pretty well, when they have only been on 6 days.

HENRY CRIPE.
North Manchester, Ind., June 28.

Why the Dysentery?—On the 3d inst., between 10 a. m. and 2 p. m., to prevent swarming I took from 1 to 4 frames of brood and bees from each of several colonies. I made one full colony, gave 3 frames to another, 2 to another, and 1 to another, and made 4 2-frame nuclei. I mixed the bees from the different hives to prevent their disturbing the queens. On the 7th, between 8 and 10 a. m., of the four nuclei I had three cases of dysentery, one so plain that the spots on the front of the hive stand as witnesses. The weather has been very wet, but the bees have been storing honey every day (perhaps 3 or 4 exceptions) since June 1st, with plenty of sealed and unsealed honey and pollen in the nuclei. Will Mr. Heddon tell us the direct cause of this, and why all four of the nuclei did not have it? Or, in fact, why they all (all the bees I handled on that occasion), did not have it? Or, why did any of them have it? By 1 or 2 p. m., on the 4th inst., there was no signs of the dysentery except the spots on the hives.

S. A. SHUCK.
Bryant, Ill.

[The illustrations given above present several very interesting problems, chief among which are the bacterium-pollen and the starvation theories. In neither case could there have been time for the development of bacteria, in no case was cold so intense as to place food beyond and pollen within their reach, nor was starvation so imminent that bees abstained from eating to eke out their stores for a more distant day. At all events, if bacteria, or pollen, or starvation, or all of these, are the prime causes of dysentery sometimes, they certainly are not at all times; and when the question is finally settled, it may be found that an undue disturbance, inhalation of too much moisture, and too rigid confinement are conducive to it.—ED.]

Immense Beginning. — The main honey harvest is over with us; the horsemint is drying up; weather dry and hot. Bees are getting some honey from mesquit. From 27 colonies (spring count) I have had 51 natural swarms, have taken 4,359 lbs. of extracted and 200 1-lb. sections, and could extract to-day at least 1,500 lbs. more, but do not want it—no time to take care of it.

J. S. TADLOCK.
Luling, Texas, June 29, 1882.

The Verdict of the Jury.—We have just received a copy of the most popular piece of music ever published in this country, called the "Verdict March," composed by Eugene L. Blake and published by F. W. Helmick, 180 Elm St., Cincinnati, O. It is written in an easy style, so that it can be played on either piano or organ. The title page is very handsome, containing correct portraits of Hon. Geo. B. Corkhill, Hon. J. K. Porter, and Judge W. S. Cox; also a correct picture of the twelve jurymen who convicted the assassin of the late President. 40 cents.

☞ Macmillan & Co. will publish immediately a little book entitled "Rules of Simple Hygiene, and Hints and Remedies for the Treatment of Common Accidents and Diseases," by Dr. Dawson Turner, revised and corrected by twelve eminent medical men connected with hospitals in London. It is reprinted from the eighth London edition, with additions. Price 50 cents.

THE AMERICAN BEE JOURNAL

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20c. per agate line of space, each insertion.

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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

◆

☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

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Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 10, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for honey is quiet. Extracted brings 7@10c. on arrival. No comb honey on the market worth mentioning, prices nominal.

BEESWAX—Scarce, and brings 20@25c. on arrival.

C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey is light, prices being made to meet views of purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—White clover, fancy, 1 lb. bxs., 15@16c.; white clover, good to choice, 1 and 2 lb. bxs., 13@14c; buckwheat, 2 lb. bxs., per lb., 11@12c. Extracted and strained, white, 9@10c; dark 7@8c.

BEESWAX—The market continues rather quiet, but the supply is light and prices firmly sustained. Western, pure, 26@27c.; Southern pure, 27@28c.

D. W. QUINBY, 105 Park Place.

SAN FRANCISCO.

HONEY—Receipts are very light. Reports continue to be received from Southern California that the crop is not large. A prominent apiarist in Ventura writes that he does not believe there will be over twenty tons shipped from that county. Not much will be required, however, to satisfy the demand at the present firm views entertained by holders.

We quote white comb, 15@18c.; dark to good, 8@12c. Extracted, choice to extra white, 7¾@8c.; dark and candied, 6@6½c. BEESWAX—23@25c.

STEARNS & SMITH, 423 Front Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—First receipts of new Texas (comb) offered to-day. Selling at 21@22c. per lb.

BEESWAX—Prime in demand at 22@23c.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—As there is no honey in market, we have no quotations this week.

A. C. KENDEL, 115 Ontario Street.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

☞ The postal law makes the taking of a newspaper and the refusal to pay for the same, theft, and any person guilty of such action is liable to criminal proceedings the same as though he had stolen goods to the amount of the subscription.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Three years ago St. Julian, the great California trotter, was unknown; the same may be said of Kendall's Spavin Cure. Now both have a world-wide reputation. Why? Because they both have merit. One is a great trotter, the other is the most successful remedy ever discovered to be used on man or beast. 26w4t

Bingham's Smoker Corner.

☞ I have tried several kinds of Smokers, and none give such satisfaction as Bingham's; 'tis worth more to me than all the rest combined.
Morning Sun, Iowa. J. E. KEARNS.

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THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

Old Headquarters for Queens.

We will be prepared on and after July 10th, to ship Queens by return mail. We have the best strain of Italians in the country. Our Cyprians, Holy Land and Hungarians cannot be excelled. No 75 cent or dollar queens for sale. Warranted Queens $1.50, Tested $2.00, very choice Selected Queens $1.75 each. We also have dark and extra light-colored Italians. All Queens warranted pure and sent by mail. Send your address on a postal for my 21st annual circular and price list.

28w1t **HENRY ALLEY**, Wenham, Mass.

HONEY

For the past few years I have made this excellent food my leading article. Having the best established reputation in this city as a dealer in PURE HONEY direct from the Apiaries, enables me to obtain the highest market prices. Your consignments and correspondence respectfully solicited.

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JUST MADE,

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20 Years Experience in Queen Rearing.

Our Motto is:

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Italian Queens.....$1;	Tested....$2
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Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian. Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Comb foundation on Dunham machine, 25 lbs. or over, 35c. per lb.; on Root machine, thin, for boxes, 40c. per lb. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1wly.

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110 **SQ. FEET**, or 11 lbs. $6; more at same rate; less, 60 cts. per lb., delivered at Express, Albany, N. Y. **H. W. GARRETT**,
27w4t Coeyman's Hollow, N. Y.

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Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN**,
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FREE! FREE!

Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.

11wtf E. A. THOMAS & CO., Coleraine, Mass.

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GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen	$4.50
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Same, after July 1	10.00
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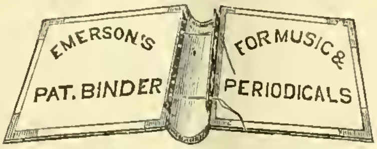

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For Bee Journal of 1881	**85c.**
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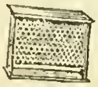

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Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

65 *ENGRAVINGS.*

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BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
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EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book. G. W. FISHER, Box 238, Rochester, N.Y.

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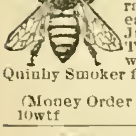

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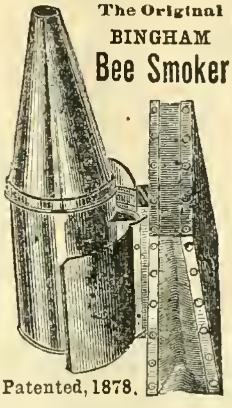

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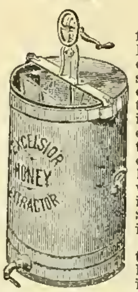

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.......... 449
California Honey Granulates.......... 449
Apiculture and Botany.......... 449
The National Convention.......... 449
Increasing Popularity of Cook's Manual.. 449
Farmers Rejoicing.......... 450
Glucose in Fraudulent Uses.......... 450
A Scurrilous Pamphlet.......... 451
Bees as Tipplers.......... 451
Distinguished Visitors.......... 451
Bee-Culture in Florida.......... 451
The California Honey Crop.......... 452

Among Our Exchanges—

Ancient Regulations Concerning Bees.... 452
After California Honey.......... 453
Harmless to Dairies.......... 453
Bees and Clover.......... 453
Keeping Bees in Texas.......... 453

Correspondence—

Extraordinary Yields in Texas.......... 454
Glass vs. "Tin," so-called.......... 454
How I Rear my Queens.......... 454
A Visit to Baltimore, Md.......... 455
Bee Pasturage in California.......... 456
The Width of Sections, etc.......... 456
Practical and Scientific Apiculture.......... 457
Not "More than Bright".......... 457

Convention Notes—

Ventura County, Cal., Association.......... 458

Selections from Our Letter Box—

Drone Traps.......... 458
More Cheerful from New York.......... 458
That New Clover.......... 458
After-Swarming.......... 459
Faith in Movable Frame Hives.......... 469
Done Nothing.......... 459
But Little Honey from Clover.......... 459
Honey at Glucose Prices.......... 459
Honey Prospects in Kentucky.......... 459
Prospects for Remainder of Season.......... 459
Supers Full of Honey.......... 459
Statistics Wanted.......... 460
Just Started in the Sections.......... 460
Still Continues.......... 460
The Prospects Discouraging.......... 460
Bees in a Starving Condition.......... 460
Bees in South Carolina.......... 460

California Honey Granulates.—The editor of the *California Apiculturist* says: "We have noticed that California honey will granulate as often as it does not. It depends a good deal in what shape the honey was when it was extracted; if fully ripe, it is more apt to candy sooner."

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☞ Each succeeding year the unicomb sections become more popular, and, so far, the demand for them has doubled every year. Those intended to hold one pound of honey are the most popular for retailers of comb honey, while the producers generally prefer those holding two pounds. The more rapid sale of the former, however, will probably more than repay the producer for the trifle less in amount that the bees may store, from the fact of their small capacity. We must follow the lead of the market, demand what it may, if we would be successful.

◆

Apiculture and Botany.—We observe our contemporary in California has adopted our special feature of combining apiculture with botany. Many bee-keepers in America owe much of their success to the encouragement and protection of honey-producing plants, suggested by the BEE JOURNAL. As the stock-raiser familiarizes himself with the grasses which furnish the best and most profitable grazing for his stock, so should the bee-keeper recognize and plant the flowers best suited to his bees, locality and climate.

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☞ We observed a bee on sweet clover on Monday last.

The National Convention.

The following is the official call of the Secretary, Dr. Parmly, for the Convention of the North American Bee-Keepers' Society. We hope there will be a large attendance:

> The North American Bee-Keepers' Society will hold their 13th annual meeting at Washington Park Hall, Cincinnati, O., across Washington Park from the Exposition building. Time, Oct. 3rd to 5th, 1882. First session Tuesday, 10 a. m., Oct. 3. We are encouraged to hope that this will be a very profitable meeting, as we are promised papers from, and the presence of, a large number of our most prominent bee-keepers both in the United States and Canada, and essays and implements of the apiary are expected from abroad to add to the knowledge imparted by the research and inventive skill and methods of our countrymen.
>
> EHRICK PARMLY, *Sec.*
>
> New York, July 12, 1882.

◆

Increasing Popularity of Cook's Manual.—So rapid has been the increasing popularity of "Cook's Manual of the Apiary," that we have recently been obliged to issue another edition, making 9,000 published to date. Apiarists have been particularly fortunate in the high order of talent devoted to the preparation of text-books, but "Cook's Manual" has rapidly taken the front position, and the Professor's scientific and practical education will enable him easily to keep his excellent book in the advance, as the frequency of the editions give him opportunity to anticipate the progressive steps.

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☞ In the Newcomerstown, O., *Index*, of July 6, 1882, we notice a long article describing the bee hive and supply establishment of Mr. R. L. Shoemaker, who, by an accident, lost his eye a few weeks ago. We are pleased to see that his establishment is of such large proportions.

Farmers Rejoicing.

The crop prospects throughout much of the country are very encouraging. The excessive rains, we are sorry to note, have been quite damaging to corn, which will require the most favorable weather from this through to make even a fair crop, but wheat, oats, rye, barley, clover, grass and potatoes, will be more than an average in yield and quality.

In Kansas the oats crop has increased from 280,167 acres in 1881 to 447,695 acres in 1882, and all reports say that it will be the heaviest crop ever harvested in that State. The wheat crop just harvested will reach over 30,000,000 bushels, and of superior quality. The acreage of corn will run 6 per cent. over last year, amounting to 4,500,000 acres, which, at 30 bushels per acre, will foot 135,000,000 bushels; it is expected, however, to reach 175,000,000.

A dispatch from Lincoln, Neb., says "each day strengthens the belief in a harvest such as was never known in the State before." Of rye the yield is much larger than in any year previous, and the wheat crop is larger and of better quality than the average. Oats and barley are heavy and of good quality. Wild and tame grasses look well, and potatoes and other vegetables were never better.

In one county in Indiana (Miami) alone, the present wheat crop will run over 1,200,000 bushels. Corn is not doing so well, being neglected by the farmers to secure their immense wheat crop.

So far as we can learn from different prominent points in Illinois, crops of all kinds, excepting corn, are very encouraging, even better than was anticipated a short time since.

A report from Dakota says "the prospect to-day has never been equaled. Wheat, oats and barley are heading out with a stand indicative of a crop simply enormous."

In Michigan the grain crops are hardly so flattering, but the yield will be a fair one.

We have no reliable data of late date from other States, but anticipate the generality of crops will be equally good, as complaints are soonest circulated when at all unfavorable.

Prices of live stock, especially hogs, have reached a fancy figure. We are told by dealers that the prices are purely fancy, speculative, and that they will have to be moderated considerably, as there is no real justification for them. Of course, prices of other meats sympathize largely with pork; but, with the excellent pasturage, it will be impossible to keep up the figures on cattle and sheep, and hogs will then sympathize to a certain extent with them, or they will be more largely substituted for food.

Glucose in Fraudulent Uses.

Mr. Le Roy Whitford, Lecturer to the Chautauqua Co., N. Y., Pomona Grange, has kindly sent us a copy of an essay read by him before the Grange. We have not space for it entire, and give only that portion relating to the glucose traffic, which will be read with interest.

Published statistics show 21 manufactories of glucose and corn sugar in this country, turning out 1,200,000 lbs. per day from 48,000 bushels of corn. The consumption of this vast product is effected through fraud by mixing with sugar, maple syrup, candy, jelly, honey and other sweets.

It has been supposed that, although of so low and poor a sweetening power that nobody would accept it for sugar or syrup when unmixed, it was not necessarily unwholesome as an article of diet when well made, and the numerous instances of injury to health, and even death from paralysis and other diseases which are known to have resulted from its use were supposed to be due to the presence of a remnant of chemicals used in its manufacture. On the part of the manufacturers it is claimed that the sulphuric acid is all precipitated so that none can possibly remain in the product or in the refuse meal which is sold to farmers to feed to stock. Where the truth lies in this controversy is not of paramount interest to consumers. It is enough for us to know that its use for only a few years has alarmingly increased the frequency of Bright's disease, and also that certain new and dangerous maladies which are developing among the poorer classes are attributed to the use of glucosed sugars and syrups by many of our best medical authorities. I will only mention here, Jas. R. Nichols, editor of the Boston *Journal of Chemistry*, who states positively "that it does produce aggravated dyspeptic symptoms, and causes flatulency and painful affections of the bowels, and that its use in larger quantities as mixed with our sugars and syrups is deleterious to health." His very interesting article closes with the declaration, "That all consumers of sweets in this country are victims to a form of fraud which deserves the prompt attention of our law makers."

But it strikes me that the true cause of these effects upon the health may be concealed in the secret process by which the liquid glucose is converted into granulated sugar. This process is said to be unknown to classical chemistry. Much as we owe to chemistry, it cannot be forgotten that from the days of the alchemists, when they tried to make gold from the baser metals they have been reaching after impossible things, and have often exclaimed "Eureka" too soon. The product of the laboratory may be identical in composition with that of nature and yet differ widely in its effect upon the human system. Nature, in some of her finer processes, is not to be approached by all the subtleties of the chemist's art.

Ask the chemist to tell you by his test what the difference is between a piece of Parian marble and a piece of the chalk cliff of England, and the answer from his laboratory will be that there is no difference whatever, both are carbonic acid and lime, and in the same relative proportion. Now ask him why they are not equally valuable as food for plants, and he cannot tell you.

A piece of carbonate of magnesia from the rocks of Hoboken treated with sulphuric acid is epsom salts. The chemist will pronounce it such and pure. But if given as a cathartic it will produce severe griping if not death.

Other instances might be cited showing that substances which are alike in composition are not always alike in their effects on the living organism, but it is enough for my purpose to show why grape sugar from corn starch treated with sulphuric acid is not as wholesome as the fruit sugar which is produced in nature's laboratory.

James' powders made from phosphate of lime and oxide of antimony, were found after 100 years to be good for nothing when made of calcined lime rock. The East India Company sued the manufacturer but could not recover, for chemists, Mr. James among them, decided that it was all right in every respect.

One word more in closing as to the remedies for the evils complained of.

And first I would avoid the use of these deleterious compounds by using instead pure articles purchased of producers. To thwart the consumers and at the same time turn an honest penny the glucose men bought the whole product of amber cane syrup of Iowa last year, mixed it with their stuff and then threw it on the market as pure.

Honey directly from the apiaries is almost never adulterated and as this fact is becoming well known an unprecedented demand is springing up for extracted honey to take the place of syrups. "The honey of the trade," as it is called, is no better, as it is manufactured in the great cities by such wholesale jobbers as the Thurbers of New York. If honey granulates in cold weather it is the best evidence of purity.

And finally, the only effectual remedy is to be sought in stringent laws against selling anything for what it is not, and the people have got to take this matter in hand and urge upon Congress a general law that shall put an effectual quietus upon these nefarious practices.

A Scurrilous Pamphlet.

"Des Vessies pour des Lanternes ou la science apistique du Comte G. Barbo, par Giotto Ulivi." This is the title of a pamphlet, the translation of which is, "The windbag for the nonsense of Count Barbo, by Giotto Ulivi." This with the occompanying volume contains about 130 pages; but the title is sufficient to disgust any honest seeker after truth. Count Barbo is a gentleman who devotes himself to the study of apiculture from a praiseworthy love for natural history, and has a discriminating judgment and scientific attainments which constitutes him one of the best authorities in Europe on all matters pertaining to the honey bee. Being wholly disinterested in all controversies pertaining to them (as we are quite sure he never reared a bee for traffic), he has in no way allowed prejudice to influence him in one of his conclusions, nor has impatience hindered him from making thorough and exhaustive researches into mysterious problems. From a personal acquaintance with Count Barbo, we feel assured that Ulivi's ridiculous bombast will only bring upon himself contempt, and increase the universal respect and esteem for the noble Count.

Bees as Tipplers.—Mr. W. T. Clary has kindly forwarded us several extracts from the *Farming World*, embodying a series of strictures from correspondents of that paper on Mr. A. C. Stipp, of South Carolina, for having advocated the use of the "old box gum" in preference to the movable frame hive of modern date. Altogether the correspondence is too lengthy for publication in the Bee Journal, and we will have to be content with making the following amusing extract from Mr. Stipp's first letter, which has opened a fair field for attack:

> A good fruit year is always a bad bee year. They may do very well in the early part of the season, but they will not do much after brandy time comes. They are great drunkards, and when they have plenty of brandy, which they always gather from the fruit and distill for themselves, like most other drunkards, they cease to accumulate and only go through with what they have. They neglect the more important duties of making a living, and mix their honey with their brandy and betake themselves to hard drinking until many of them die drunk, if they don't fill a drunkard's grave.

Distinguished Visitors.

On the 14th inst. we were agreeably surprised with a personal call from Mr. James Anderson, bearing the following courteous introduction:

> T. G. Newman, Esq., *My Dear Friend.*—Allow me to introduce to you our most advanced bee-keeper in Scotland. To live in the West and not have the acquaintance of James Anderson, of Dalsy, Scotland, is not to be in the bee world. For 50 years he has held his own against all comers, and he it was who went to the first Crystal Palace Show in London, and completely revolutionized the mode of taking surplus. He is on a short visit in search of health, which I sincerely hope he will gain, and bring back a host of information to us from our "American cousins." Well do I remember your happy visit to Perth, and only hope I may be able some day to come and see you.
>
> Yours, faithfully,
> Robt. J. Bennett.
> Glasgow, Scotland, May 22, 1882.

We met Mr. Anderson at the Perth, Scotland, bee and honey show, of which Society Mr. Bennett is the honored Secretary, and although Mr. Bennett's very welcome letter was not necessary to insure Mr. Anderson a cordial welcome, it lent a greater zest to our friendship for the distinguished visitor who bore such honorable credentials. We are glad that so far Mr. Anderson's impressions of our country have been most favorable, and he will take back to Scotland a foundation machine and various other implements of our most improved patterns. He goes from here to visit a son several years a resident in Texas, and from thence to visit another in Colorado. We wish him an agreeable visit in our country and a pleasant return.

On the same day (July 14) Mr. Patrick Robertson, of Newhall, Scotland, paid us a visit, bearing a letter of introduction which Mr. Bennett closes thus gracefully: "Kind regards, and hope you will have an extra good season. Has *Apis Americana* reached the top of the tree yet?"

Mr. Robertson's visit to the United States is for the purpose of making this a future home. He goes from here to Des Moines, Iowa, from there to Winnepeg, and thence to Los Angeles, Cal., where he intends engaging in bee and orange culture. He is a gentleman of affable address, discriminating observation, and much experience, and we wish and predict success for him, in whatever enterprise he may engage.

Bee-Culture in Florida.

Mr. W. S. Hart, of New Smyrna, Fla., has kindly sent us a copy of his circular issued under the auspices of the State Immigration Agent, and published in the Tallahassee *Floridian*. It is quite lengthy and interesting, but we confine ourself to making a few extracts. The circular consists of a series of questions and answers. We presume copies can be obtained, by sending a few stamps to pay postage, of Mr. Hart:

Question.—Does it pay to keep bees in Florida?

Answer.—Yes, in many portions of the State it pays as well or better than in any other State, and there are parts where bees can scarcely make a living.

Q.—What is the average increase and honey production per colony in an average year? A.—In good locations the average natural increase is from 1 to 3 and 150 pounds of honey. They often do much better than this. I have known one colony to increase naturally to nine strong ones, in one season, and give considerable surplus honey besides.

Q.—What enemies and disease do they have to contend with? A.—I have never seen or known of a diseased colony of bees in this State. Foul brood, dysentery, etc., are unknown here. The enemies are toads, dragon flies, ants, moths, and birds; but Italian bees, well attended, will keep so strong in numbers that the combined efforts of their enemies seem to affect them but little.

Q.—What part of the State would you recommend for an apiarist to locate in? A.—Having never been in the northern portion of the State, I know but comparatively little of its honey resources. I am told that bees do very well in many localities, and one correspondent writes that his bees get the swarming fever in October, from a heavy flow of honey, which usually comes about that time. I am better acquainted with South Florida and consider the coast counties lying south of the northern limit of the mangrove tree (a little north of 29th parallel) unsurpassed for the industry.

Q.—Do bees get lazy after being in your State for a while? A.—No.

Q.—Do the bees gather the year round, what do they gather from, and what is the quality of the honey? A.—No, there are usually three and sometimes four honey seasons, with honey drouths between, each year. I will quote from an article of mine published in the *Florida Agriculturist*, of November 9th, 1881: "Our bees winter perfectly on the summer stands, and gather honey or pollen every month in the year. The first honey flow commences about the 1st of February and swarming about the 10th of March. In April or May we usually have a honey drouth of a few weeks, sufficient to check the swarming fever. Then comes the saw palmetto, sweet bay, basswood, etc., giving a good flow of very heavy honey, of light, amber color, and excellent flavor. This flow lasts until the cabbage palmetto and mangrove come in, the last of June. From this on until about the 10th of August, the flow is continuous and heavy, the honey as handsome as can be produced, and of very fine flavor. A resting spell now comes for the bees, which lasts until the middle of September, when the fall flowers, and later, the saw palmetto berries, yield a surplus of darker honey, suitable for winter supplies or spring feeding. As bees fly here almost every day in the year, fall honey can be fed without fear of dysentery. Some of the leading honey and pollen-producing trees are the maple, willow, sweet-gum, the bays, orange, myrtle, oak, basswood, hickory, youpon, mock-olive, saw palmetto, cabbage palmetto and mangrove, the last two of which come together, in the middle of the summer, and are unequaled as honey-producers by anything else in the whole vegetable kingdom known to the writer. They produce honey in abundance, of the finest quality, and we think it is safe to say, never fail to produce a good crop. We also have honey-producing vines and plants too numerous to mention.

Q.—Where is your market for honey? How do you ship? And what are the prices obtained? A.—We have a limited home market for extracted honey, at 8 to 10 cents, and comb 15 to 20 cents per pound; but most of the larger producers ship their crops to the markets of the North.

Q.—Are there plenty of bees for sale near you, and if so, what are the prices asked? A.—In my immediate neighborhood there are very few bees for sale, as nearly everyone who has any had rather buy than sell. But in many parts of the State where "improved bee-culture" is unknown plenty can usually be bought in log gums or in boxes at from $1 to $2 per colony.

Q.—Are there many engaged in the bee business near you? A.—There are quite a number of apiarists within a few miles of me, and some of them are skillful and well up in all the modern improvements, but I know of no other good point in the State that comes anywhere near being stocked.

Q.—How does Florida compare with California for bees? A.—Parties that are well posted and reliable, write me from California that they occasionally get very large crops of honey there, but that on an average, but one year in three can be counted on for much surplus, while occasionally they have a year that kills off thousands of colonies by starvation. Also, that the fruit-raisers and bee-keepers are at war, and the former are driving the latter into the mountains, "where no white man wants to live." Here in Florida our seasons are remarkably even in honey production, and we never have a year that a paying crop is not produced. Bee-keeping is antagonistic to none of our industries and good men are welcome to any part of the State, no matter where they come from. From what I can learn of the matter I am confident that our good bee pasturage is not more limited in extent than that of California, and there six hundred men give their whole time to the business, while I do not suppose there are a dozen in this State but what keep bees merely as a side issue.

Living is cheap here, as but little clothing is required; wood is plenty for the gathering; a house can be built for a ridiculously small sum that will do until a better can be afforded. Fish and game are plenty, and vegetables do well where properly attended to. Good board can be had with a private family for $3 to $7 per week.

I am often asked what success I have had at bee-keeping, and so I have published my reports each year, but as this may reach many who have never seen them, I will say that in 1880 I started in the spring with fourteen colonies, increased to forty and took nineteen hundred pounds of honey. It was considered a poor year and I used no foundation. In 1881 I started with thirty-five colonies, increased to eighty-six, and took six thousand five hundred pounds of honey by actual weight; I also left about one thousand pounds in the hives that could have been spared without cutting the bees short in winter stores.

The California Honey Crop.

As we have heretofore said, the prospect for a short honey crop in California is now a realized fact, and it only remains for the bee-keepers east of the Pacific slope to insist upon a good price for their honey, and to take no less. The *Apiculturist* for July says:

> In Southern California the principal honey season closes this month with the sumac bloom, which like most of the other honey producing plants that have preceeded it, will not yield much honey this season, judging from present indications and state of the atmosphere. It has been our observation for several years past in this country that when the first flowers of the season fail to secrete nectar those that follow usually fail too. The weather continues cool with occasional indications of rain—this state of things debar all hope for but little more honey than perhaps will be needed to carry the bees through the winter with. In alfalfa localities bees will doubtless store some surplus.

☞ The postal law makes the taking of a newspaper and the refusal to pay for the same, theft, and any person guilty of such action is liable to criminal proceedings the same as though he had stolen goods to the amount of the subscription.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Ancient Regulations Concerning Bees.—Mr. Kruegell has collected the following "bee laws" for the *Benenzeitung:*

1. Bees which live in the woods, or cling to fences, bushes, or out in the fields without being hived, are public property, and belong to anyone who secures them.
2. Honey or wax which has been gathered by wild bees, may become the property of whoever takes possession of it.—Cournelle.
3. But when bees have become domesticated in a hive, or elsewhere, they are the personal property of whoever possesses that place, and he is not allowed to destroy them by fraud, malice, or prejudice, or harm them in any manner.—Vandore.
4. By the same reason, the owner of a stray swarm, if he has followed and not lost sight of it, can claim and take possession of it no matter where it may have alighted, but if otherwise, it is the property of the person upon whose premises it may have settled and whoever shall seize it can be compelled to return the same.—Coullier.
5. Should the owner of any grounds, upon which a stray swarm of bees may have settled, endeavor to injure them in any manner, he forfeits all right and title thereby.—Argan. C. N. 564.
6. The "Code Rural" proclaims, that the proprietor of a fugitive swarm, who has followed it, even if it is lost to his sight for some time, may claim and recover it when found.—Codo Rure.
7. The Romain law does not coincide with the above statement.—Romain law, 584.
8. For this reason it is customary to follow a swarm of bees with a great noise.—Cournelle.
9. The usufructuary, (occupant, or tenant) farmer, lodger or any persons who possess ground property, with precarious right, have the right to use any swarms that have started from their property.—Cournelle.
10. But if the swarm has settled upon grounds possessed by a farmer, usufructuary, etc., it can only be used as an accessory to the grounds by the farmer, usufructuary, etc.—Cournelle and Vandore.
11. The administrative authorities have the power to forbid any person placing bees in towns, cities, etc., or in public squares, or highways, or any place where they may trouble or injure the public.—Vandore.
12. But about this restriction there exists no law or custom which prohibits the private individual from keeping bees in any place he chooses, upon his own grounds, or transport-

ing from one place to another to suit his convenience.—Vandore.

13. Should any person receive injury to himself or property by the aforesaid moving or displacement of bees, he may claim and recover full value of damage done.—C. N. 1382.

14. Bees, of course, are movable, but they become immovable when the proprietor places them to the account of the ground property.—C. N., 524.

15. The part owner of a swarm of bees, cannot force his partner to divide it. He must dispose of his part by auction.—Vandore.

16. The "Code Rural," sections 1, 2, 3, has forbidden the seizure of the hives and contents for any debts, unless these debts are not contracted toward the one who furnished them, or toward the proprietor of the grounds. Section 3 forbids the removal of the hives even, if seized during the months of December, January and February, but this prohibitory law is not mentioned in the "*Code de Procedure*," which states different seizable property, without including bees.

Koenigshopfen, Germany.

After California Honey.—The Oakland, Cal., *Tribune* says Mr. Joseph M. McCall, of Thurber & Co.'s New York house, was recently in California to purchase all the honey that may be offered him. That paper adds:

Mr. McCaul, it is feared, will find California apiarists rather slow and backward in disposing of this year's crop, unless they are offered a good price for it, as the yield has not been great, but the quality, nevertheless, is excellent. It is said that this year's harvest will not be more than one-fourth of a crop. Ventura county which produced 400 tons in 1878, will produce hardly twenty tons this year. Their agent will also purchase all the California wax that he may be able to find. In the past few years the demand for this product has more than doubled, principally on account of there being so much of it used in the manufacture of what is called comb foundation.

Harmless to Dairies.—Among the unsettled points, Mr. A. Pettigrew mentions the following in a late number of the London *Journal of Horticulture*:

A parsimonious old farmer whose clover fields were visited by our bees sorely felt that his fields would have been richer without them, and so convinced was he that his butter was impoverished by our bees that he trod to death all he possibly could, and threatened to use the horse roller when the bees were at work. On mentioning this to Dr. Lindley, 40 years ago, he said, "the old farmer was a blockhead," but that did not settle the question. Had the farmer just cause for complaint? If the 20 or 40 lbs. of honey gathered by bees from his clover fields daily had been left in the flowers, would his cows have yielded more and richer milk? This is a question which I have not been able to answer, and therefore, so far as I am concerned, it will remain unsettled. In hot weather flowers that yield honey do so constantly; and if not gathered by bees it is carried off by the atmosphere in odors. All honey thus carried off is lost to bees and their owners, as well as to farmers and their cows. The question now mooted is more easily understood than answered satisfactorily. Though difficult of solution, it may be well to think about it. White clover and trefoil (*Lotus corniculatus*), are the only pasture flowers that I can think of that yield honey to bees. Bees are of great service to farmers and others in their orchards and gardens, and in fertilizing field beans.

Bees and Clover.—The *Gentlemen's Magazine* gives the following on the advantages of bees to clover:

Bee culture has been powerfully advocated for the honey sake, and would probably be more general if sugar were not so cheap. There is, however, another advantage, which Darwin's researches have proved—viz. the action of the bees in fertilization of flowers. Every farmer who grows red clover for the seed sake is too familiar with the uncertainty of this crop, the seeds of which ripen with most vexatious inequality. Herr Haberlandt, who has followed up and confirmed the researches of Darwin in reference to these particular flowers, strongly recommends the rearing of bees on all clover farms for the special purpose of fertilization, even though their honey be disregarded, for it appears that clover is entirely dependent on insects for its fertilization, and chiefly upon bees. The form of the flowers and the manner in which the maturity of the lower florets precedes that of the upper florets renders the success or failure of a clover seed crop simply a result of the employment or non-employment of these humble farm laborers.

Keeping Bees in Texas.—Dr. J. E. Lay gives the following reasons why he keeps bees, in a late number of the *Texas Agricultural Journal*:

The following are some of the reasons why I keep bees: Their habits afford me quite an extensive field for scientific research. Endless experiments may be made with them that will elicit much profitable knowledge. The naturalist, the physiologist and anatomist can find in their study much that is useful and advantageous in their particular branches of learning. Indeed it is a field that the scientists may enter and find much material that is wonderful as well as most beautiful, to engage his highest thoughts. He looks upon new and strange wonders that continually call forth his admiration. It is a part of the great domain of nature that the most learned may not despise, but enter with the reap-hook of his genius and gather many golden sheaves.

The bee is an insect of the highest order, filled with nerves, blood-vessels, lungs, glands, and a finely organized brain. It also possesses a sting of great energy, by which it may defend its home and young and repel only intruders; and thus, in the protection of home, and in the defense of its young, it displays an instinct of the highest order that is rarely to be found in such degree except in man. Being thus wonderfully endowed by the Creator, they present to our minds a subject worthy of intelligent consideration.

Bee-keeping is looked upon as rather a small business, that depends largely upon the luck of the individual engaged in it, and not worth "fussing" after by men of skill and education. This accounts for the fact that one of the most pleasant as well as profitable industries of our great State has remained in the background, entirely neglected so long, simply because there has not been given to it a rational and intelligent investigation. That time is past, and thousands throughout our great land are engaged in scientific apiculture, and are reaping rich harvests of golden nectar each season, that is fast making them financially independent. It has taken its place as one of the great industries of our country. The time is close at hand, if not already upon us, when extracted honey will rank as one of the staples of the world. Yes, as staple as molasses or sugar—an article of food at once the most wholesome and pleasant to the palate of man that ever was bestowed by the hand of an indulgent Creator.

We have been taught to look upon honey as a rare luxury, exceedingly difficult to obtain, and only in small quantities, to be used on fete-days, or to be carefully stowed away for sickness. This is a grand mistake. The giver of all good did not so intend it, but He scattered the beautiful flowers over our land, pleasant both to our eyes and olfactory sense, and filled them with this golden sweet. Yes, lavished it around us in thousands of pounds, waiting, ready to be gathered by this wonderful insect, the bee, which is so easily made subservient to the intelligence of man, going forth as never tiring servants at his bidding, gathering and pouring into our store-rooms, not as a mere luxury, but as a rich, wholesome necessary food to gladden the young, the old, the rich, the poor, for indeed all may enjoy this blessing that are willing to labor for it only in an intelligent manner.

This portion of Texas is eminently adapted to apiculture. In this part, bees will live through any winter without any protection, if left with plenty of food. They will gather two crops of honey every year—a light-colored crop in the spring, that cannot be surpassed, and a wine-colored crop in the fall, which possesses an exquisite flavor, and in taste is preferred by some epicures to the light spring honey.

CORRESPONDENCE

For the American Bee Journal.

Extraordinary Yields in Texas.

B. F. CARROLL.

A barrel of honey from one colony! and still the great flow goes on. Never has there been such a flow of honey. The extremely mild weather, with an abundance of rain even up to the 10th of June, has given us one solid mass of horsemint. Over 3,000 acres of this grand honey plant within easy reach of my bees. Bees have increased over 500 per cent.—yes, often 10 colonies from 1, and now they are swarming. Seven swarms have gone to the woods to be messed up by bee-hunters, and yet I have 111 colonies, all from 40 in the spring, and I have sold 32 full colonies—all this increase is by natural swarming.

Moses T. French and W. R. Melton, the champion black bee men of old Navarro, have gone into conniptions over their great yield. Some of their best black colonies have given as much as 100 lbs., while Capt. A. S. Gill, of Purdon, Navarro County, from the under side of a bench on which a black colony was sitting, took 118 lbs. of choice comb honey. Bee-trees have been cut, and from 100 to 200 lbs. of comb, dirt and honey were taken. The demand for improved hives, etc., has been great, and it was almost impossible for me to keep hives to put my own bees in. I have been obliged to use oil boxes, cracker boxes, etc., to put bees in, in order to forward apiculture hereabouts. Being the first to introduce the frame hive, the people still call on me.

There are now around me the following bee-keepers: Dr. H. B. Ransom, 35 colonies; W. R. Melton, 71; Dr. C. H. Hart, 50; Westbrook & McAfee, 110; M. T. French, 35; Dr. W. S. Robinson, 20; R. Gowen, 10; G. W. Thomison, 11; B. F. Carroll (self) 111; Elizabeth Melton, 25; and about 75 colonies, here and there, from 1 to 5 in a place, giving a total of 553; with G. W. Acre, of Cross Roads, 25, and H. Forgey, Blooming Grove, 25—in all, 600 colonies in a radius of 7 miles. And in this radius 10,000 colonies could have gathered over 200 lbs. per colony. Honey is fast superseding glucose syrups, called honey drips, corn shuck, golden sweet, etc.

And now let me report what my bees did for me from horsemint. All the colonies I extracted close gave from 140 to 700.; being overrun and not having money to purchase supplies, hives, foundation, etc., I lost ¾ of the grandest honey crop ever seen in Texas. Now for that prolific queen I wrote about some time since. Up to June 1st I extracted 22 lbs. from spring flowers, and began taking mint honey June 1st from 3 upper stories, 54 lbs.; June 7, 3 upper stories, 75 lbs.; June 14, 4 stories, 75 lbs.; 14th, 4 stories, 112½; 21st, 4 stories, 129½ lbs.; 26th, 4 stories, 123½; 30th, 4 stories, 115½; July, 7, 4 stories, 68 lbs; total, from one colony, 700 lbs.; nearly 5,000 lbs. up to date from all.

Hurrah for D. A. Jones' Cyprian bees! The best bees on the face of the globe. I expect bee-keepers ought to give me the premium for being ahead. Had I managed this colony rightly I could have obtained half a ton from it.

Dresden, Texas, July 7, 1882.

[Are we to understand our correspondent obtained 700 lbs. from one colony alone, or from one colony and its increase? If from one colony, what has been obtained by its increase, if any? If the honey flow, as we understand, is not yet through, we would like a report from this colony and its increase at the close of the season.—Ed.]

For the American Bee Journal.

Glass versus "Tin," So-called.

LOUIS KNORR, M. D.

It certainly is the duty of every bee-keeper to scrupulously refrain from any action or practice whereby the purity of honey might be impaired. Now, I contend, on chemical principles, that leaving honey in contact, for a certain length of time, with tin so-called ordinarily, but properly speaking with the alloy of tin and lead, as is the case when honey is filled into tin pails for the retail sale, or filled into tin tanks for maturing it, or permitted to stay for some time in the extractors, must expose it to contamination with lead.

Many of the readers of the Bee Journal will know that the ordinary sheet-tin is in reality sheet-iron coated with a thin film of an alloy of tin and lead. For hygienic considerations, it would be desirable that this film should consist of pure tin. But, unluckily, pure tin does adhere only with the greatest difficulty and rather imperfectly to iron. Thus the manufacturers of sheet-tin are compelled to use an alloy of tin and lead. Nearly everybody knows the injurious effects of lead, in all its chemical combinations, and even in the minutest quantities, if long continued, upon the human system. It is contended that a small amount of lead alloyed with tin is so thoroughly held by the latter that it cannot be attacked and dissolved by the sugars and acids, and thus cannot enter into our articles of food. Granted. But, as far as I know, hygiene has never solved the question—with the assistance of analytical chemistry—how great the amount of lead may be in the alloy without incurring the risk of injury to the human system. The great difference in the prices of tin and lead is a standing inducement for the manufacturers to increase the proportions of lead enormously, and to an injurious extent.

Some time ago I analyzed, for my own satisfaction, a sample of canned tomatoes and one of canned peaches. The first, against my expectation, did not contain any lead; but the latter did to a considerable extent. Whether the tin (so-called) of the tomato-can contained less lead proportionately than the other can, or whether the sugar in the peaches could exert a greater action upon the lead than the acid in the tomatoes, I cannot decide. In the honey, the saccharine and acid principles must attack the lead in the so-called tin vessels. I could observe that, a couple of years ago, my extractor was considerably corroded by the honey that was, by mistake, allowed to stay for some time.

The French government has, some time ago, taken measures against the indiscriminate use of tin vessels for holding preserved food containing acid and saccharine substances. And I think bee-keepers ought to store their honey in glass or wood (how would paper-kegs impregnated with paraffine do?) as long as no discrimination is made in the trade between tin (rich in lead) for roofing purposes and tin for holding articles of food.

Savannah, Ga.

For the American Bee Journal.

How I Rear My Queens.

G. M. DOOLITTLE.

Editor Weekly Bee Journal:—As this subject has engrossed so much attention, I should not have written on it but for the fact that upon the queen depends all there is of bee-keeping. The following I have already contributed to the *Magazine* on this subject, and should like you to give it in the Weekly Bee Journal:

When we realize that all the bees of a hive are the offspring of one bee (the queen), and that the more bees we have in time for the honey harvest, the greater the assurance of a large yield of honey, we can form some opinion of the worth of a good, prolific queen, and of the disappointment which will await us if we have a poor, worthless queen in our hive. Nature provided a sure way to rear the highest type of royal descendants, and pronounced it good. Although many have been the plans devised to rear excellent queens outside of the natural swarming of bees, still I have yet to hear the claim that queens reared by any one of these plans are superior to those produced from cells, nursed and cradled by a full colony of bees preparing to swarm. On the other hand many do believe that queens so nursed and reared are better than can be produced by the ordinary plans which are used, myself included in that number. Therefore I rear, as far as possible, all my queens from cells produced by natural swarming. To accomplish this object, my best colonies are selected in early spring, which are stimulated to their utmost to get them to prepare for swarming as early in the season as possible.

But how shall we get our bees strong in time for the honey harvest is a question I am often asked, so I will tell how I manage: In early spring I go over all my bees and take an inventory of the number of spaces occupied by the bees, and also to see that each colony has honey enough to last them till warm weather comes which is told by the amount of sealed honey in sight. If but little sealed honey is to be seen the hive is marked and fed. As soon as pollen comes in freely, each hive is examined and the brood nest reversed, *i. e.*, the combs that have brood in them are changed so those having the least brood are placed in the center, while those from the center are placed on the outside. By so doing, the queen is incited to greater activity, and those combs which had the least brood in them soon have the most, thus giving quite a gain over letting nature take its course. In about 10 days the yard is gone over with again, this time taking a comb containing honey from the outside of the cluster, and often breaking their sealing to the cells by passing a knife flatwise over it; the brood nest is spread apart and this prepared comb is placed in the centre of it. This causes the bees to remove the honey and in so doing the queen is fed, thus causing her to lay much faster than she naturally would, and thus this comb is soon filled with eggs which means bees in the near future. In about a week the same operation is gone over again.

In order to get a succession of superior cells from my best colonies, it is necessary to keep them swarming as often as possible. To accomplish this I adopt this plan: As soon as they have become established in their new home, say in two days after the swarm has been hived, I insert 2 frames of hatching brood in their hive, and in 3 days more I give them 2 or 3 frames more, which soon makes their hive more populous than was their old home from which they issued. This causes them to swarm again in from 12 to 18 days from the time of hiving, which gives me another lot of splendid cells. Thus I keep my best colonies producing cells of the highest type as long as the honey season lasts. Thus I have given you my plan of getting queens that are acknowledged by all to be as good as any, and believed to be superior by some.

Having procured our queen cells, the next things in order are nuclei. There are many ways of making a nucleus, and the plan I see most recommended is to go to any hive populous in bees, and take from it a frame of brood, and one of honey, with all the adhering bees (being careful not to get the old queen), and place them in an empty hive, adjusting the division board to suit the nucleus. In 24 to 48 hours after they will have become aware that they are queenless, when a queen cell should be given them. Now, although a nucleus can be formed in this way that may work in warm weather, still in cool weather it would be a failure, and, according to my opinion, is not a good plan at any season of the year, on account of the number of bees which will return to the hive from whence they were taken, thereby depopulating it to such an extent that the brood will mostly be chilled in cool weather, and seriously weaken it even in warm weather. Bees that have been used to a laying queen do not kindly take to brood for a mother; hence all go home that are capable of getting home. But should you happen to get the queen on these two frames, you would see that the bees would feel at home, and all but the old field workers would stay where the queen was.

From this fact, that bees will stay with their queen, I arrived at the following: Inasmuch as a queenless colony, with sealed cells, depend on those cells for a mother, if a frame of brood containing a sealed queen cell, with all the bees adhering to it, are put in a new hive, the bees will stay there the same as they would in the case of a laying queen, as given above. After thoroughly trying this plan, I have found it to work to perfection; and by making the nucleus hive perfectly tight, and shutting the bees in for 24 hours, opening it about dark, scarce one of the old field workers will go back to their former home.

Now for my plan of making nuclei! When all the queen cells are sealed in my queen-rearing hive, I get as many frames of hatching brood from different hives, in the yard, as there are cells in the hive, lacking the number of frames of brood the hive already contains. Brush all the bees off these frames of brood, and let them run back into their old hive, inserting frames full of comb or foundation in place of them. Now carefully fit one of the queen cells into each of these frames, and set all in the colony which produced the cells, and close the hive till 24 hours before the first of the cells should hatch. By this time enough young bees will have hatched to thickly cover all the combs, with scores still hatching every hour. Now get your nucleus hives all ready by making all as warm as possible, and having a nice fitting division board in each one, when you will go to your other hives and get a frame of honey, brushing all bees off of it, for each nucleus. Next take a frame from your queen-rearing hive—bees, queen cell and all—and place it with your frame of honey in your nucleus hive, and adjust your division board. The next day at night open the entrance, and you have a nucleus as good as any one could desire.

In this way make nuclei of all the frames which contain queen cells but one, leaving that to form a nucleus on the old stand. In about 10 days your queen will be laying, when she can be used as you desire. Thus I have given how I rear what I term *good queens*, which have given me the results I have reported for years past, and I claim such queens cannot be reared for $1. When our dollar queen-breeders will rear all their queens in this way, I shall be willing to say that a $1 queen will be just as good for honey-gathering purposes as a $3 queen.

For the American Bee Journal.

A Visit to Baltimore, Md.

ARTHUR TODD,

Late of Blidah, Algeria, and Rambouillet, France.

A few weeks ago a friend, finding me to be an apiarist, induced me to join the Philadelphia Bee-Keepers' Association. In due course I brought forward the subject of breaking down prejudice against our pets, by the establishment in Fairmount Park, or other open space, of an apiary, where open air exhibitions could be given, etc., similar to those established on the Continent of Europe. The suggestion was well received, and the material for a model apiary was donated in a very short time. A committee was appointed to see what could be done, but I regret to say we found it too late for this year, but are promised powerful assistance for the carrying out of the idea next spring.

Having business in Baltimore, and finding there was quite an extensive queen-rearing establishment and apiary there, conducted by Mr. Lake, I duly applied for and obtained permission to make a call. This I did last week, and was well received, seeing everything in the city establishment, as also at the honey apiary some miles outside the city limits. The premises occupied by "Sunny Side Apiary" have a special interest for our craftsmen, for here it was that Colvin had his apiary, and here worked with him his friend Langstroth.

Mr. Lake has some Syrians, and right here I would say that they have one strongly marked characteristic in common with the North African variety. They scatter, and rush about the comb too much for easy examination. They rush to a bottom corner, form a knot of bees, and "flop" they go, falling into the hive or on the ground. Some colonies of Italians opened out before me were certainly the quietest strain I ever handled. There seemed to be quite a hum of joy when the hive was opened, and I made my examination without any veil or other protection without a single sting. One interesting colony is an Italian, an actual lineal descendant of the first Italian colony ever imported here. I believe imported by Mr. Colvin. They are a large bee, and I pointed out to Mr. Lake how, to my mind, they are the mountain race or Bellinzona bee, bred high up in the Italian Alps, while other and smaller-bodied Italians belong to the races bred in the Italian plains or lowlands. Years ago I noticed a great difference between the bees I imported from Bellinzona and those from Milan and Bologna. The true mountain Ligurian seems to me to be a stronger-bodied bee, and in ordering I would give the preference to them any day.

In what we may call the museum, was a hive of remarkable interest, being a bar-frame hive sent over to Mr. Colvin by King Otho, of Greece. This hive was originally made and used near Mount Hymmettus, in Greece, and is practically what is known in

Italy as a "Sartori three-decker." The walls are double, with air space. The lugs of the three rows of frames run into grooves cut on the inner shell of the hive, and the entire back of the hive forms a door moving on hinges which, when opened, at once discloses the entire interior of the hive, but has the disadvantge of forcing one to draw out every frame to get at any one frame in the rear.

At Mr. Lake's honey apiary I found some 400 to 500 colonies, many of them in really splendid condition, and notwithstanding the unfavorable few weeks preceding, I counted 75 one-pound boxes filled with capped honey on many colonies. This apiary Mr. Lake runs for honey in the one-pound box alone, finding that he can dispose of every ounce readily at 25 cts. per pound.

The bees had only worked on poplars and honey locust when I was there, and they appear not to touch or care to touch clover at all. In discussing with Mr. Lake the reason for this, I remembered how my old friend Monsieur Layens, in France, after careful investigation (he being a thorough botanist and chemist), advanced the theory that when the spring of the year is very wet, the clover yields little, or no honey, because those soluble constituents of the earth, the source of the honey secretion, had been by excess of rain washed beneath the surface to a depth too great for the root of the clover to reach.

Altogether I had a most enjoyable visit, and while not agreeing with all Mr. Lake's theories, that very fact lent zest to our conversation, and I came away after enjoying his hospitality, feeling I had added to my store of knowledge, and another to my list of bee friends.

Philadelphia, Pa.

Semi-Tropic California.

Bee Pasturage in California.

C. N. WILSON.

The very large area of land in Southern California now devoted to the cultivation of wheat and barley, that but a few years ago was covered with trees, shrubs and plants from which bees gathered honey, and the absolute certainty that even more of the wild trees, shrubs and plants yielding honey, must very soon give way to the requirements of agriculture, it becomes the apiarian who desires a good yield of honey, to prepare pasturage for his bees. In this semi-tropical clime the task is comparatively easy, as it requires but a few years to make groves of blue gum, acacia, locust and such other trees as produce abundant supplies of honey, yielding flowers at different seasons of the year. The blue gum begins to bloom at 5 years from the seed, and will grow on rocky or sandy soil where hardly anything else would grow, provided it is watered the first two years; it will bloom in February and March. The acacia is readily grown from seed planted just as corn is planted, about the 1st or 15th of March, and cultivated the first year; afterwards it will take care of itself and bloom the second year from the seed, often commencing to flower in January, continuing until April. The black locust tree requires more moisture to grow well than the acacia, and is like it in this respect, that the seeds must be well scalded with hot water to make them germinate. The willow grows readily from cuttings, and should be planted from December to March; in very moist land it will do to plant as late as April. Doolittle extols the golden willow as a honey producer, and it would be advisable to experiment with this variety of the willow, and possibly it may be suited to this locality; if cultivated the first two years after planting, the several varieties of willow indigenous to Southern California will grow in nearly any soil. Every variety of fruit tree, except the fig, produces bloom, furnishing both pollen and honey. The apricot and peach, and some varieties of the pear will grow well in warm, sandy soil, even where there are no facilities for irrigation, and will the second year after planting produce both flowers and fruit; the fruit will not be so large or showy as that grown on damp or irrigated land, but will be sweeter and better. If the fruit merchant objects to the fruit for any reason, then crush it in the orchard and the bees will very soon convert it into first-class honey, which you can ship to Europe and get more cash for it than if you allowed the fruit merchant to have it.

Alfalfa yields a good quality of honey, and is in bloom every month in the year; it will grow without irrigation in any kind of soil, amongst stones, on such land as cannot be cultivated. Scatter the seed plentifully during the winter months, so that the winter rains may settle it into the soil and give moisture enough to cause it to germinate; keep sheep off the ground so planted, and let the alfalfa get a start, and nothing but gophers can eradicate it. Most persons think that alfalfa must have plenty of water at all seasons of the year in order to grow, but for bee pasture good results may be had from it without other moisture than that obtained from rain.

Sweet corn, when in silk and tassel, will ordinarily furnish large quantities of honey of a superior quality; in localities free from frost it may be planted at intervals from December to May, and give good pasture for 3 months, if not four, in the year; no matter if the corn never matures, the honey product will well repay the trouble and expense of planting, and the stalks if cut just when the bees quit gathering honey from the tassels will make a superior fodder for sheep, goats or cattle. Melons and squashes if planted early will yield large quantities of both pollen and honey, and will reward the bee-keeper for the trouble of planting, though he should get nothing else from them than the honey. Peas and beans yield honey from their flowers, but should be planted early in the spring, as the hot sun destroys the nectar of their bloom, and unless the bean is irrigated in the summer season it will not be of much value as a crop. Every bee-keeper should make it a point to experiment with trees, shrubs and plants, so that whatever can be made available as a honey yielding help, in this climate of sunshine and country of wonderful vegetation, may be known and cultivated by the bee-keeper.

Our several associations would do well to devote considerable time and attention to the subject of bee-pasturage, for this question is of the very first importance to all of us.

Los Angeles, Cal.

For the American Bee Journal.

The Width of Sections, Etc.

JAMES HEDDON.

It should not be forgotten that when, by experiment, the width of sections was decided on as 2 inches, separators were the all-in-all that then went with them. Now the use of separators has been and is being abandoned by many of our best honey producers. Mr. O. H. Townsend, of Kalamazoo, Mich., now thinks that 1¾ inches is a better width than 2 inches. In this we exactly agree. I have used that width for my 1882 crop. I made the change in my last winter's orders for sections. I used the 4¼x4¼ x2 inch sections, 6 sections in a division, and 4 divisions in a case. The divisions run across the hive. I now put 7 sections where 6 filled the space. I found that where no separators were used, the bees sometimes started their combs between the combs drawn from full pieces of thin foundation. Now this trouble is at an end.

I now get the benefit of the use of one more piece of foundation in every seventh section, which benefit is several times its cost. I find the bees cap over the honey sooner, and build the combs straighter. I presume Mr. Townsend is correct in saying that with these thinner sections the bees ripen the honey quicker and more perfectly, and that is the reason they cap over more promptly. Before, our sections used without separators overrun a pound in weight. Now they will come as near an exact pound as any size can be made to do. I am well satisfied with my surplus system, and it is worth a great deal to be satisfied with one's own fixtures, whether any one else is or not.

When I first saw the cut and read the description of the "Dean section case," on page 245 of this year's Bee Journal, I was tempted to make some and try them. They have the advantage that they can be made of most any lumber. After revolving the practical use of this case over in my mind, and talking with an old Bingham hive owner and manipulator, I concluded I need not put any more honey in the old direction, experimenting with this case.

I thought the side boards would shrink and swell away from the length of the end pieces to the broad frame. I dread complication. These wires, side-boards and pieces look formidable to me. I think I should prefer the Bingham style of "key" for clamping the frames. I have heard of these keys giving way, when lifting the hive, and the whole thing going "ker-smash." What if the "Dean case" should come that on a fellow when it contained 28 of those nice white combs? Would'nt those bottom bars sag? True, when unclamped or unkeyed it comes apart nicely, but then, after all, is it not neater and handier to lift a section out of a solid case, when on the hives or when off, to invert the whole and push out the whole 28? A job of a moment only. If this system is best for the surplus department, why not for the brood department also? If it is for the latter, why don't Quinby's and Bingham's style of frame supersede the Langstroth frame, in the solid case with solid bottom? They have had time enough surely. I think I should prefer my old wire clamp method as shown in cut on page 159 of BEE JOURNAL for 1879, or in *Gleanings* on page 116, 1881, if I were going to use any clamp method at all. This is my second year's use of the solid, divisioned, no glass case, and, as above stated, the solid individual comfort I have taken, and am taking with its manipulation, is highly prized by me. All my help, and all my visitors, and those who have used them, like them best of all, so far as heard from. There is no patent on it, and did I feel able, I would give the readers a cut of the case.

They are made of common thin lumber, and any good mechanic can make them as they should be. I should be pleased to see them in general use, and all the reward I ask is the little honor due this little invention. If any better thing comes up, I shall be among those who rejoice in its use, and with smiles and dry eyes will gladly watch this case as it takes its march toward the silent portals of eternal forgetfulness.

Dowagiac, Mich.

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Nebraska Farmer.

Practical and Scientific Apiculture.

T. L. VON DORN.

Every pursuit, every profession, every business enterprise must, in order to be made a success, rest upon certain known, fixed rules of action, based upon the accumulated knowledge of which practice has been shown the best fitted to obtain the best results. Scientific apiculture is comparatively of to-day's creation, yet its possibilities are encouraging enough to warrant all the careful thought, business accumen and energy that the best of us can offer. Fortunately many of the problems, obscure so few years ago as to be within the memory of almost all present, are solved, and instead of the doubt, uncertainty and mystery of the past, the greater part of the conditions requisite to success are well known and are easily complied with. One element of success, however, at times, baffles the best of us, yet would seem to be of easy solution, notwithstanding the apparent uncertainty which now obscures this part of our occupation. Of course, I refer to the wintering problem, for let us so improve our bees that we get hundreds of pounds from every colony, and increase almost at will, yet, if, in the recurrings, we find that few of our colonies have survived the winter, or having survived, are indisposed or incapable of giving the best results, we have most certainly failed in this, which to-day is practically the greatest obstacle in scientific bee culture. I cannot believe, however, that the day is far distant when we shall surmount this as we have other difficulties apparently as great. Bees are warm-blooded creatures and I can see no reason why they should be an exception to other animals in regard to their care, and believe the question to be simply how to so care for them as to comply with known laws in such cases.

But practical apiculture rests upon more than the mere knowledge of what can be and should be done. It rests upon the unwritten part of our trade, which is quite as much to learn as the trade secrets of any other occupation, the knowledge of just when and how to perform the little operations that go to make up the day's labor: or, as it is commonly expressed, the "knack" of knowing just how and when to do it. You must know just what the condition of every colony is, and when occasion arises must aid them promptly promoting this, checking that, leaving nothing to uncertainty, in fact, you must live with your bees if you would close the season's labor with success.

How to obtain this knowledge is a matter for your careful consideration. Undoubtedly, if you were so situated as to make it possible, the advice and precept of some skillful apiarist would be preferable. but I imagine that but few are so situated and therefore it may not be amiss to refer you to such resources as will furnish reliable information. I confess it is with pride I can say to you that the works of our own countrymen, are pre-eminently the most practical and scientific. No one can read "Cook's Manual" without being impressed with the labor and research necessary to enable the author to place before the reader and carefully explain anatomy and physiology of the bee, and its bearing upon practical agriculture, or the years of toil which has made the "A B C of Bee Culture" what it to-day is, or the common sense of "Quinby's New Bee-Keeping." We should be proud of our countrymen. But with all your knowledge never neglect the little things that impress you at the time as new. Follow up your practice with careful study and investigation. Lay the foundation for success broad and strong, and when the superstructure is built it will long endure.

Omaha, Neb.

For the American Bee Journal.

Not "More than Bright."

R. BACON.

The BEE JOURNAL of June 28th, says: "Prospects more than bright; from every quarter come the most encouraging hopes." Now, this being left out in the cold makes me feel rather chilly. Perhaps it is all for the best; other sections may feel the same and not like to mar your bright prospects. But permit me to say that one section, little Central New York (perhaps it is not quite large enough to be called a "quarter") has nothing good in the bee line to report. Bees are swarming but little, and have gathered but little honey up to date. Yesterday I called on a bee man at Oneida who has over 100 colonies. Less than one-third of his bees have swarmed, and some had begun work in boxes a very little, but no boxes half filled. He did not know any bees that were doing much. He is yet hoping the weather will change, so we will get some honey.

Last year at this date I had taken off more than half a ton of section honey; but now not one box finished, and not 10 colonies doing anything in the boxes. Now, if you feel like helping the bee men of this cast-off section, please turn those honey spouts (not your big western waterspouts) this way. We will set our houses in order, and will not scold if you daub us a good deal, nor will we dodge. We may do better in future—the summer is late.

Verona, N. Y., July 13, 1882.

[The prospects at the time the article alluded to was penned, were very bright. There were especial districts where they were more than excellent, others not so good, but, generally, they were more than bright. Nor is there cause for despondency yet. Had the weather been propitious, and prospects realized, even Central New York would have given a good yield. The season is late—very late—but the promise is abundant, if the weather is such the bees can gather it. Sweet clover is just coming into bloom with us now; last year this time they had been working on it a month nearly. However, we will have plenty of it, and summer and fall flowers will be immense. We hope Central New York will then come in for its share.—ED.]

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☞ A bear, wishing to rob a bee hive, laid himself down in front of it and overturned it with his paw. "Now," said he, "I will lie perfectly still and let the bees sting me until they are exhausted and powerless; their honey may then be obtained without opposition." And it was so obtained, but by a fresh bear, the other being dead.—*Exch.*

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

July 25—Western Iowa, at Winterset, Iowa.
Henry Wallace, Sec., Winterset, Iowa.
Aug. 10—Maine State, at Harmony, Maine.
Wm. Hoyt, Sec.
Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.
Oct. 3-6—North American, at Cincinnati, O.
Dr. Ehrick Parmly, Sec., New York City.
5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.
Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

California Apiculturist.

Ventura County, Cal., Association.

The Ventura County Bee-keepers' Association met at Santa Paula, on Saturday, June 10th.

In the absence of the president, Mr. Wilkin took the chair and stated the object of the meeting. He said the Association had been called together for the purpose of devising means to rid the country of foul brood. As the present was not a very busy time for bee-keepers, owing to the failure of the honey crop, he thought it a good time to make a united effort to get rid of the disease, and prevent if possible, its spreading to the mountains. He thought if it once got into the trees and rocks it would be impossible to check it, and bee-keeping would become a very precarious business. He suggested that a "foul brood inspector" be appointed to examine all apiaries where the disease existed, or was suspected to exist, and assist the owner to obliterate the disease.

Mr. Corey thought it too big an undertaking for one man; he thought there could be found eight or ten men in the country with sufficient experience to assist in the work; and an inspector, if appointed, should be vested with power to appoint a sufficient number of deputies to assist in the work, that it may be more thoroughly and speedily accomplished.

Mr. Strathearn thought that all the apiaries in the country should be examined and certificates of health issued to those whose apiaries were found free from disease, and if anyone refused to have their bees examined, it would be an evidence that their bees were diseased, and that they were concealing the fact in order to sell out, but if no one would buy bees except from those who could show a certificate from an inspector appointed by the Association, the practice of selling diseased bees would soon become obsolete, and all would be anxious to have their bees examined and the disease exterminated.

The convention coincided with Mr. trathearn's views and voted to appoint an inspector, vested with the power to appoint deputies and issue certificates to those whose bees are found free from disease. R. Touchton was nominated for the position and elected by acclamation.

Mr. Corey moved that a tax of 1 cent per hive be levied on the members of the Association and requesting that all other bee-keepers in the county contribute and forward to the Secretary a similar amount, for the purpose of creating a "foul brood fund," to defray the expenses of the inspector and his deputies. Motion carried.

It was also thought advisable where but few diseased colonies were found to destroy them entire, and the loss thus sustained to be made up by the Association in bees, the owner bearing his proportion of the loss. As to the extent of the disease Mr. Edmondson reported that the disease had been in his apiary, but thought he had it reduced to less than a dozen cases, but was not certain; he said he would be very glad to have them examined by an expert, and the diseased colonies destroyed.

Mr. Grimes said he thought his apiary was entirely free from the disease, but nevertheless would be glad to have them examined, and if any cases were found he would destroy them; he expressed his willingness to assist in the work of eradicating foul brood, as did also Mr. Corey and others, who had had experience with the disease.

The convention adjourned to meet at Santa Paula, the first Saturday in August.

R. Touchton, *Sec.*

SELECTIONS FROM OUR LETTER BOX

Drone Traps.—On the 4th inst. I bought a colony of Italian bees, that had no queen, but 11 queen cells. On the 11th inst. I opened the hive and cut out 10 queen cells, and within 15 minutes 4 of them emerged. I caged them and made nuclei hives for them and the queen cells. All the rest of my bees are blacks. 1. How can I catch the black drones? 2. Is there any kind of drone trap; if so, how can I make it? S. J. Hopkins.

Evansville, Wis., July 14, 1882.

[1. D. A. Jones, Beeton, Ont., has advertised and sold quite extensively a perforated zinc for the purpose of placing at the entrances, which, while too small in its perforations to admit of the passage out of well developed drones, will allow an entrance for worker bees.

2. There have been several contrivances gotten up for that purpose, but we are unacquainted with their details, and almost doubt the perfect utility of them.—Ed.]

More Cheerful from New York.—I have had some bees for the past 3 years. I commenced with the chaff hive, and do not use any other, and have not lost a colony since I have been in the business. In the spring of 1881 I had 5 colonies. I let each colony throw off one swarm, and then cut out the queen cells, so my swarming season lasted only two weeks. I had 10 colonies in the fall, and sold about $60 worth of honey in Syracuse at from 13 to 15 cents a pound. In May last, when I took them out of the chaff, I found every colony strong and healthy. I put 64 one-pound sections on each colony. I now have 19 colonies. I never saw bees do better than they are doing now; they work early and late, and in all kinds of weather. Although we have had a very cold, late, rainy season, I believe my bees will make up for lost time. Everything is growing rapidly here, and we expect a good crop. I would like to know—1. How to unite 2 weak colonies in the spring? 2. How to unite 2 swarms in swarming time? 3. How to unite 2 weak colonies in the fall? 4. In manipulating the bees, what kind and how much smoke to use. I am in the habit of using a smoker, and blowing a good quantity of tobacco smoke into the hive before I commence work.

Edward Newcomb.

Centerville, N. Y.

[1. As good a plan as any is to use a fresh hive, put it on a new stand, place the old hives one on each side, slant a board in front from the ground to the alighting board, remove one queen, cage the other in the center hive, then shake the bees in front, alternating frames from the two hives in shaking off.

2. Shake the bees on a sheet in front of the hive, in one pile, and remove one queen as they crawl up to the entrance.

3. There are several methods. Usually, quite late in the fall, if one queen be removed, then the frames of the two colonies be alternated in one hive, there will be no trouble.

4. Use any good bellows smoker, putting a live coal in the bottom, and dry, partly rotted wood on top, or cotton rags, you can make a sufficient smudge. We do not recommend the use of tobacco in smoking bees; nor an excessive use of any kind of smoke.—Ed.]

That New Clover.—I have gotten myself into a fine box by sending you that sample of new white clover, as I have not the time to answer the numerous correspondents in regard to it, and those who are ordering seed, etc., from all parts of the United States and Canada. Now, will the Journal be so kind as to say I have no seed to send this year, but will have enough next year to spare in small quantities to the numerous apiarists of this

country (for I am now satisfied that the Bee Journal is the right medium to advertise through, since my late experience). My bees are booming, and keep me busy extracting and taking off boxes, etc. The prospect at present is that the white clover will last for two or three weeks yet. The season is turning out better than we expected.
H. Besse, M. D.
Delaware, O., July 12, 1882.

After-Swarming.—Mr. James Hobart, of this place, has one colony of Italian bees that have sent out 5 swarms. The first one came out June 11, and the last one yesterday, July 13. Is not that an uncommon occurrence? Bees are doing finely; white clover in great abundance.
J. C. Marvin.
Fairchild, Wis., July 14, 1882.

[After-swarming is not an unusual occurence. We have heard of instances where after-swarms came out so numerously that the parent colony was ruined, there not being young bees enough left to properly conduct the affairs of the community. As many as 10 swarms from 1 have been reported. Of course, all were exceedingly small.—Ed.]

Faith in Movable Frame Hives.—Since my last letter (June 14), we have had a week of steady rain, doing considerable damage to crops of all kinds. On low bottom land our bees seemed to be a little on the decline during the latter part of June, as there was so much rain fell that it washed all the nectar out of the blossoms. I have been a reader of the Bee Journal since last March. I couldn't do without it, but I thought the movable frame bee hives were humbugs. Being determined to satisfy myself in regard to the matter, I drafted out and built a movable frame hive, somewhat after the pattern of the Langstroth. I put doors and glass in the four sides, so as to give me an insight. I gave them starters of comb foundation and put in a swarm the 21st of June, and in 14 days they had the hive filled with comb, and had brood capped over. I now see the convenience of movable frames. I expect to use them altogether next season. My neighbors worry my patience calling to see my new bee hive, and every one admires it very much. I am puzzled over two late swarms. The first one came out July 1st, clustered, and was hived. In the evening they swarmed out and went back into the old hive, leaving a small bunch of bees not more than a tea cup full in the hive. These remained six days, when they swarmed out and clustered on a willow tree. I examined them and the queen bee was with them. I brought her to the house and caged her, and the bees then went back to the old hive and went in, only to be dragged out and killed. The second swarm came forth July 2, and was a small one. I hived them with considerable trouble. They remained about 3 hours and swarmed out and went back to the old hive, staying 4 days and swarmed again. There were about twice as many as at first. I hived them again, and in about one hour and a half they swarmed out and went back again, staying 2 days, and swarmed again (being the third time). There were four times as many as at first. I had now resolved to try an experiment. I spread down a clean tablecloth upon some boards I had prepared, and placed the hive at one edge. After shaking the bees down in front of the hive I sprinkled them cleverly with water, clipped my captured queen's wing, and dumped her into the middle of the pile, then drummed them all into the hive together. After they all went in, I gathered up the cloth in front of the hive and wound up the hive completely, leaving it remain until dark, when I carried it to the stand where I wanted it to remain, and took off the cloth. They are now working splendidly. Will you tell me the causes why did the first colony swarm out and the queen remain, and why did the second colony swarm and re-swarm so often, and then be forced to stay?
Frank B. Rife.
Malaby, O.

[In the first instance mentioned, after the bees deserted the queen in the hive leaving but a cup full, they became discouraged with the prospect of rearing brood in a hive so much larger than they could properly warm and fill. At the end of six days the bees had become strangers to the parent colony, and going in with empty honey-sacs, were mercilessly slaughtered.

In the second case, the bees led by the queen swarmed and re-swarmed in each case to get reinforcements. They finally remained because the queen was clipped and could not go with them. There are many anomalous cases of swarming which are almost inexplicable, and require a careful study of the circumstances to account for it.—Ed.]

Done Nothing.—Bees have done nothing here. The honey harvest is now over. I do not know of a box of honey being made in the county. The weather has been very fair for queen-rearing. We have had plenty of rain the past week, and that has prevented queens from mating.
Henry Alley.
Wenham, Mass., July 6, 1882.

But Little Honey from Clover.—Bees have not done much thus far this season. White clover has been in full bloom for about a week; but it has given but little honey as yet—too cold and wet. I do not look for a large crop of honey in this section the present season.
C. Butman.
Plymouth, Me., July 6, 1882.

Honey at Glucose Prices.—"The Coming Market," is the title of an article written by James Heddon, which appeared in the Bee Journal, page 374, June 14, 1882, and is a timely warning to the honey producers of our land. It is an able article, and should be read and well considered by every one interested in the production and sale of pure honey. I, for one, most heartily indorse the language contained in Mr. Heddon's article. It seems to me that if every bee-keeper considered this matter in the same light that Mr. Heddon does, pure honey would not be sold at glucose prices. Last season our comb honey sold at wholesale for 20 cts. per lb., and our extracted at 15 cts. per lb., the majority of it being consumed in the village of Ashtabula. I believe the bee-keepers of the Eastern and Middle States should use every effort to stimulate and improve their home market, and then such men as Thurber & Co. would not have a chance to speculate on our honey by mixing it with glucose syrup, thus reducing the price of honey down to starvation prices. Our bees are doing well on the white clover. I think, by the way the bees work to-day, they have struck a new field of labor. Perhaps it is the basswood just coming into bloom. Our forests in this locality are lined with this honey-producing tree. I am very much pleased with the Weekly Bee Journal.
V. H. Ormsby.
Pierpont, O., July 6, 1882.

Honey Prospects in Kentucky.—Honey prospects are very poor here. Acres and acres of white clover in bloom, but the weather is not propitious for the secretion of honey. This month has been very cold so far. I received a letter to-day from C. F. Muth, of Cincinnati, and he says he will not get as much honey as he fed in the spring, but, as he also remarks, "as good Christians we shall console ourselves with the hope of better prospects in the future."
W. T. Clary.
Clarysville, Ky., July 7, 1882.

Prospects for Remainder of Season.—Bees are doing well here now, and the prospects are good for the remainder of the season. White clover bids fair to yield well for two weeks yet. The great amount of rain that we have had will make a great abundance of bloom from wild flowers. Heartsease and smartweed are in many cornfields to the annoyance of the farmers, but to the benefit of the bee-keeper. An unusual amount of buckwheat has been sown about here. Bees are working well in boxes, and we are busy extracting from a part of our apiary, which is run for extracted honey. We are very busy.
F. A. Snell.
Milledgeville, Ill., July 10, 1882.

Supers Full of Honey.—Bees have done finely here. Hives and supers are chock full of honey.
A. Benedict.
Bennington, O., July 12, 1882.

Statistics Wanted.—Bee-keepers in this State, who wish to forward the interests of apiculture, will please send me the name and address of the Secretary of the local agricultural society, as I wish to correspond with them in regard to the offering of premiums for the best display of honey, implements for the apiary, bees, etc. I would also like to have all bee-keepers in Massachusetts send me a report of the season's work, number of colonies, etc., as I wish to give a more complete report of the condition of bee culture in this State than has ever been published before, at the meeting of the National Society in October. Bees are doing very poorly in this section this season; no honey and but few swarms.

E. A. THOMAS, *Vice Pres.*
for Mass. of N. A. B. K. Society.
Colerain, Mass., July 10, 1882.

[We hope all bee-keepers in Massachusetts will promptly respond.—ED.]

Just Started in the Sections.—My 70 colonies of bees have just started in the sections, but it rains so frequently that they do not make much progress. They were nearly famished when red raspberries came into bloom, 3 weeks ago. No swarms have issued yet, and this is the situation of all the bees in this section. Still, clover is abundant and is yielding honey, and basswood will be ten days or two weeks later than usual, and may give us a good harvest.

LEROY WHITFORD.
Stow, N. Y., July 3, 1882.

Still Continues.—The prospects of a good honey crop still continue. So far I have taken off 7,000 lbs. extracted honey. We have occasional showers which contribute greatly to the improvement of the cotton, corn, and other crops. Fruit is very abundant.

O. M. BLANTON.
Greenville, Miss., July 9, 1882.

The Prospects Discouraging.—The weather has been so windy and stormy that bees have had very little chance to gather honey. Some colonies have not swarmed yet, and none have gathered much honey.

DR. J. A. MORTON.
Bethel, Maine, July 13, 1882.

Bees in a Starving Condition.—Bees just starving, with the 4th and 5th of July the coldest and most rainy days I ever knew in this month. If queen-rearing isn't up-hill business, call me a goose. As far as I hear, bees are generally in a starving condition throughout this State.

G. M. DOOLITTLE.
Borodino, N. Y., July 7, 1882.

Bees in South Carolina.—We have had an excellent spring for honey, until June 15th. Since then bees have gathering but little. We also have a boom in the bee business in this county. We are talking of organizing an association.

H. S. HARDIN.
Chester, S. C., July 10, 1882.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

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☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

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☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

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☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

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Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 17. 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good. 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for honey is quiet. Extracted brings 7@10c. on arrival. No comb honey on the market worth mentioning, prices nominal.

BEESWAX—Scarce, and brings 20@25c. on arrival. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey is light, prices being made to meet views of purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—White clover, fancy, 1 lb. bxs.. 15@16c.; white clover, good to choice, 1 and 2 lb. bxs., 13@14c; buckwheat, 2 lb. bxs., per lb., 11@12c. Extracted and strained, white, 9@10c; dark 7@8c.

BEESWAX—The market continues rather quiet, but the supply is light and prices firmly sustained. Western, pure, 25@26c.; Southern pure, 26@27c.

D. W. QUINBY, 105 Park Place

CLEVELAND.

HONEY—The first new honey arrived this week, and 1 lb. sections sold at 25c. per lb. No extracted received as yet. BEESWAX—25@28c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—Not much arriving, and most of that is held above buyers' views. Some very white comb is offering at 16c. Buyers refuse to name more than 8c. for extracted of the choicest quality, but there are some lots of excellent body, color and flavor, which are limited at 9c.

We quote white comb, 15@29c.; dark to good, 8@12c. Extracted, choice to extra white, 7¾@8½c.; dark and candied, 6@6½c. BEESWAX—23@25c.

STEARNS & SMITH. 423 Front Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—First receipts of new Texas (comb) offered to-day. Selling at 21@22c. per lb.

BEESWAX—Prime in demand at 22@23c.

R. C. GREER & CO.. 117 N. Main Street.

☞ "Bad luck," when applied to bee-keeping usually should be stated as "bad management."

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Binders for 1882.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

◆

Three years ago St. Julian, the great California trotter, was unknown; the same may be said of Kendall's Spavin Cure. Now both have a world-wide reputation. Why? Because they both have merit. One is a great trotter, the other is the most successful remedy ever discovered to be used on man or beast. 26w4t

Bingham's Smoker Corner.

☞ I have tried several kinds of Smokers, and none give such satisfaction as Bingham's; 'tis worth more to me than all the rest combined.
Morning Sun, Iowa. J. E. KEARNS.

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THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

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I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.
14w39t J. S. TADLOCK.

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1-frame Nucleus, with Tested Queen....$4.50
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Same, after July 1..........10.00
Tested Queen, before July 1, 3.00
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1wtf Burlington, Iowa.

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SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book. G. W. FISHER,
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☞ Also for sale at the BEE JOURNAL Office. ☜
2w6m.

NEW IDEAS.

Foundation ready for business, sheets bound with a light wooden rim, sample 6c; Bee's Tongue Register, sent by mail for $2.25; Italian Queens improved by a new process; Italian or Black Bees for sale in a hive adapted to migratory bee-keeping—can be securely closed for moving in one minute. For particulars address,
9smly JOHN H. MARTIN, Hartford, N. Y.

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To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian, Cyprian and Holy Land Queens and Bees.
J. C. & H. P. SAYLES.
4sm15t Hartford, Wis.

MY 16-PAGE PRICE LIST of Italian, Cyprian and Holy Land Bees, Queens, Nucleus Colonies and Apiarian Supplies, will be sent to all who will send me their name and address on a postal card.
H. H. BROWN,
14smtf Light Street, Col. Co., Pa.

PURE ITALIAN QUEENS—Bred from selected tested Queens; also, Chaff and Simplicity Bee Hives, all kinds of Sections, Wide Langstroth frames, and all kinds of Apiarian Supplies. Send for Price List. A. B. MILLER & SON, Wakarusa, Elkhart County, Ind. 21sm4t

W. Z. HUTCHINSON,
Rogersville, Genesee County, Mich.,

Makes a *specialty* of rearing fine Italian Queens. All queens bred from imported queens, and from the purest and best home-bred queens, and the cells built in full colonies. No black bees in the vicinity. Single queen, $1.00; six queens for $5.00; twelve or more, 75c. each. Tested queens, $2.00 each. Safe arrival by mail guaranteed. Send money by draft, registered letter, or by money order drawn on Flint, Mich. 26smtf

1882-Southern Headquarters.-1882
For Early Italian and Cyprian Queens;

Imported and Home-bred; Nuclei and Full Colonies. For quality and purity, my stock of bees cannot be excelled. I make a specialty of manufacturing the Dunham Foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Catalogue, giving directions for introducing queens, and remarks on the New Races of Bees. Address,
DR. J. P. H. BROWN,
5smtf Augusta, Ga.

ONE-PIECE SECTIONS a specialty. Pound size, $4.50 per 1,000. L. Hives 50c. Also, Italian bees for $8 per colony. Circular free.
8sm12tp BYRON WALKER & CO., Capac, Mich.

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Golden Italians & Original Albinos,
BEES AND QUEENS.
Send for Circular. J. M. C. TAYLOR,
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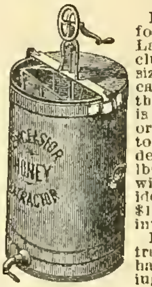

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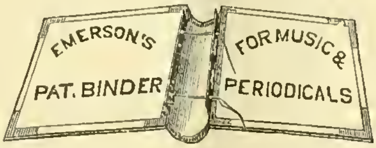

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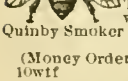

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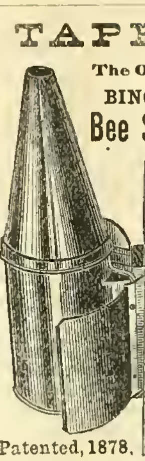

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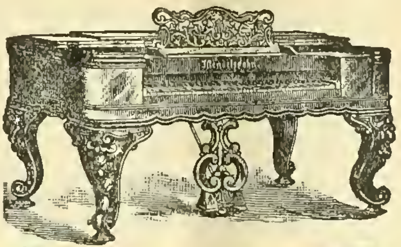

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Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. Price, **10c.**

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. This contains many useful hints.—Price **15c.**

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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Apiculture in the State University......... 465
The St. Louis Fair......... 465
Lecture on Practical Botany......... 466
Editorial Items......... 466
Drones and their Work......... 466
Normal Excretions of Bees......... 467
Cincinnati Industrial Exposition......... 467
Smoker Fuel......... 467
Selling Honey at Fairs......... 467

Among Our Exchanges—

The Smoker Useless with Cyprian Bees... 467
Had Enough of Cyprian Bees......... 468
Fumigating Bees......... 468
Equalizing Colonies......... 468
Bees Gathering Pollen......... 468

Convention Notes—

Local Convention Directory......... 468
Convention Notices......... 468

Correspondence—

A Day with Mr. Heddon......... 469
Apiarian Exhibits at Fairs......... 470
Apicultural Professorship, etc......... 471
Queens, Drones, Workers......... 472
Increasing Bees by Division......... 472
Bee-Keeping, and What?......... 473
Questions about Honey Plants......... 473
Practical Hints in Apiculture......... 474
Do Bees Void Dry Excreta?......... 474

Selections from Our Letter Box—

Bees Going Into Other Hives......... 475
Behind Time......... 475
Queen Cell from Fertile Worker......... 475
Mr. Shuck's Problem......... 475
Rearing Drones......... 475
Fertile Worker......... 476
Anticipations Realized......... 476
Exasperated......... 476
Only Fair Weather Needed......... 476
Pasturage for Bees......... 476
The Honey Harvest......... 476
Silver Linings......... 476
Prospect Very Poor......... 476
Still Hoping......... 476
Comb Foundation......... 476
A Large Honey Harvest......... 476
A Peculiar Season......... 476

Apiculture in the State University.

On page 471, Mr. James Heddon very frankly gives his views regarding an apicultural chair in our Illinois Industrial University, but we are forced to differ slightly with him regarding the objects sought to be attained, and the qualifications of the Professor. We fear it would be as difficult a task to teach any person practical apiculture, as it would be to instruct any person in practical farming, practical house-building, practical banking, or practical dry goods vending. Practical apiculture, as with every other practical pursuit, requires much practical experience and a combination of many qualifications to make it successful as a specialty. Who would claim for a moment that the best law university in the United States can impart an education sufficient to insure a national reputation for its graduates? All the University or College can do is to prepare its graduates to receive the practical education.

In our State University we want a Professor or Chair of Apiculture, where the student can be instructed in the natural and physiological history of the honey bee; where the State will encourage the solution of many very important and vital problems, which now stand in the way of successful and special apiculture; where men of eminent talent will be set apart and given facilities for carefully and scientifically investigating causes of disease, and evasions of natural results. What specialist, if any, has the necessary time and facilities for determining many questions daily arising, and which require the nicest scientific education to properly conduct their investigation. The very fact of there being a multiplicity of hives, theories as numerous as the bee-keepers themselves, and errors and hobbies as ridiculous as superstition, prove the want of more thorough education, and the lack of reliable authorities. With our present brilliant array of practical talent, such as can be found in every National, District, State and Local Convention, which meet periodically, and the several bee-papers to publish their frequent interchange of ideas, practices, successes and failures, the practical education will rapidly inculcate itself. But scientific, theoretical, positive education we lack, and mere individual, casual observation will not supply the want. In our introductory article on this subject we suggested the Illinois Industrial University, because we know of no institution so central, with such eminent talent for the purpose, and we mentioned the name of Prof. Burrill in connection with the department, because he possesses in a remarkable degree all the qualifications required to conduct the experiment to a happy success. In the one man is combined to a rare degree the botanist, entomologist, microscopist, philosopher, and scientific gentleman.

◆

St. Louis Fair.—We have recieved the Premium List of the twenty-second St. Louis Fair, which opens Oct. 2, and closes Oct. 7, 1882. The premiums appropriated amount to $50,000, of which best display of Italian bees receives $20, black native bees $20, imported queen $10, comb honey diploma and $10, crate of comb honey silver medal, crate of apiarian implements diploma and $10, best bee hive, honey extractor, wax extractor, bee smoker, honey knife, and bee veil, each a diploma.

Lecture on Practical Botany.

We feel confident our readers all take a deep interest in everything relating to botany and entomology, so far as they are directly connected with bee-keeping. Dr. J. R. Baker, of Keithsburg, Ill., sent us two specimens, which Prof. Burrill describes below in his very instructive manner. One specimen has been the cause of much annoyance, on account of waxing up the feet of the worker bees:

> I send two varieties of plants that are indigenous to this locality and give the names of both, if you please. In our ignorance here we call the one with the red bloom white root, or pleurisy root, but I don't know really what it is. The bees work on the bloom (which is very profuse) very eagerly, and seem to get honey from it freely. The flowers are beautiful, and if it is a good honey plant it would pay to cultivate it. It grows from 20 to 30 inches high, and is nicely grouped, a great many stocks springing from one base. The other specimen which I send is not yet in bloom, but it bears a yellow flower, on which the bees work very industriously in the early part of the day. The plant only grows from 6 inches to a foot in height, and the leaf looks like that of the locust. The sandmint or beemint, etc., of which I made mention recently in the BEE JOURNAL, I see Prof. Cook calls *Monarda fistulosa*. Your book entitled "Bees and Honey," is a magnificent little work. I have Prof. Cook's and A. I. Root's books, and I like them both very much, still I find much pleasure and profit in reading your "Bees and Honey." Every beginner in bee-keeping ought to have your book and it will do the veterans in the ranks good, too, I am sure.

No. 1. *Asclepias tuberosa*, butterfly weed or pleurisy root. This handsome plant, common in fields (hedgerows, etc.), meadows, and waste places with its leafy stem and conspicuous clusters of reddish-orange flowers, the latter appearing throughout the latter half of summer, certainly deserves attention. It is a beautiful thing seen at a distance, and its curiously contrived flowers merit the closest inspection and most careful interpretation. Bee-keepers, however, should observe another thing connected with the plant. There is a good supply of nectar, and bees are not slow to find it out, but many of them pay dearly for their booty. The pollen is lodged in cells with external slits, and collected small pear-shaped stalked masses, which are quite viscid or sticky. To reach the nectar the bee must press against the parts containing these waxy pollen masses, and are almost sure to withdraw them adhering to the insect's body. Not unfrequently the feet become clogged with the amount of the viscid material from which extrication is impossible. The poor honey gatherer dropping upon the ground or lodging among the grass, struggles in vain for freedom, and dies for want of it. My observations, however, have not been full enough to warrant any statement of the real danger to which a colony of bees are thus exposed where the plant abounds. If I mistake not, the subject has been pretty well written up by some one.

No. 2. *Cassia chamæcrista*, partridge pea, wild sensitive plant. This common, yellow flowered plant is often very abundant in rather low grounds. The leaves are considerably alike those of its relative, the sensitive plant of the green-houses, and are slowly sensitive to touch. The flowers are very attractive to honey-loving insects, and are visited often in great numbers. At the base of each compound leaf there is a curious-stalked, button-shaped gland, which also excretes a sweet fluid and which, therefore, attracts bees and wasps. What is this for? It is well understood that the nectar of the *flower* serves to secure the aid of insects in carrying pollen, and so favors cross-fertilization, but what advantage can it be to the plant to manufacture and exude the enticing substance far from the flower? From some observations made years ago, I think a possible explanation is offered. Will others seek to disprove or corroborate. It is manifestly injurious to the plant if cross-fertilization is a benefit, to have the nectar of the flower stolen by creeping insects, for they cannot readily pass from plant to plant. Now, if any such ascend the stem, these little stores from the leaf glands would be sure to receive attention, and thus the flower be more likely to escape. That ants do thus turn aside I have frequently seen; but something more. Wasps, during fair weather, are almost constantly busy about these leaf glands, and they appear to do yeoman service in keeping down all sorts of creeping things. What intricacy of plan, what marvellous adaptation of means to end!

☞ Dr. J. P. H. Brown, of Augusta, Ga., writes thus: "We are having a delightful season—plenty of honey and lots of fruit. The crops are very fine and agriculturists ought to feel happy."

Drones and their Work.

Hon. G. W. Demaree, with his proverbial candor and usual ability, on page 472 treats of "queens, drones and workers," and "assumes when a proposition has long been accepted as a 'fact,' the burden of proof rests on the shoulders of those who wish to controvert and overthrow it." We have long had a *doubt* whether the poor drone has had full justice done it, but have only expressed a doubt, and gave our reasons for entertaining it. Had we known that our doubts were susceptible of being converted into accepted "facts" at the present time, we should have arrayed our proof as frankly as we intimated a doubt.

The first and third of Mr. Demaree's propositions we are not disposed to controvert at the present time, although we should not hesitate to do so if we thought they were founded on error.

We think, however, our correspondent is in error in saying no one colony will tolerate more than one queen, but the exceptions are so rare as to most fully establish the rule; and yet the very colony in which the intrusive queen might be soonest killed, will perhaps be the one to tolerate most drones. It is notorious, that bees are usually most prosperous when the drones are most plentiful, and it is possible that each contingency is to an extent dependent on the other. It is not proof that drones perform but the one single function, because tradition or theory accredits them with but one, or because we have no means of arriving at present at their specific work.

During two days of last week very industriously employed in assisting to extract, it was a noticeable fact that the colonies wherein the most drones were peacefully harbored, were in no wise deficient in quantity of honey, nor in its ripeness and quality.

☞ Mr. Elias Clouse, who has been elected secretary and treasurer of a new Canadian Bee-Keepers' Society, organized on Jan. 13, 1882, writes us that though they have had but 4 meetings, the members now number 40. This is a good beginning for the "Norfolk Bee-Keepers' Association," and promises good results. The next meeting will be held at Simcoe, Ontario, on Friday, August 4, 1882, at 2 p. m.

Normal Excretions of Bees.

We publish on page 474 of this number, a very interesting communication from Mr. C. N. Abbott, editor of the *British Bee Journal*, discussing Rev. W. F. Clarke's question, "Do bees void dry excreta ?" Mr. Abbott's article proves much observation and experiment, and apparently goes far to substantiate his conclusions ; however, the writer fails to tell us whether the supposed dry excreta is a normal, healthy voidance, or the opposite extreme of the dysenteric voidure.

The writer's standpoint is well taken, that "bees can only void their excreta naturally when on the wing ;" but it may be a matter of doubt whether any insect or animal *can void dry feces*, though frequently we come across those which are comparatively dry. And here arises a question as to the chemical composition of those dry grains or pellets frequently seen in shipping boxes, and sometimes on the bottoms of the hives. A careful analysis and microscopical investigation may determine the presence of beeswax to such an extent as to explain their appearance.

Again, if these pellets are the excreta of bees in a healthy, normal condition, then the amount of flight necessary is certainly very limited, if a box of the dimensions given by Mr. Abbott affords ample facilities, and it would be an easy matter for the apiarist to provide such, and periodically during a protracted or unusually severe winter, remove his colonies into a heated room, run them into a box of corresponding dimensions, give them a lively "shaking up," and again return them to their hives for another season.

As intimated by the learned writer, much more is involved in this question than mere idle curiosity, and we unite with our contemporary in hoping that the matter will receive the fullest investigation at the hands of the most scientific and progressive apiarists in all parts of the world. Those having the facilities, leisure and necessary expertness, have opportunity for a very interesting series of experiments.

◆

Cincinnati Industrial Exposition.—We have received the circular of the tenth Cincinnati Industrial Exposition, which opens Sept. 10 and closes Oct. 7, 1882. The circular is a marvel of neatness and taste, and certainly is a credit to the Exposition as well as the lithographers, and embraces liberal premiums for all the leading features in art, science, literature and agriculture—almost everything, except bees and honey.*

◆

Smoker Fuel.—Mr. A. S. Etherington, Melton, N. S., writes as follows :

> I send you by mail to-day a sample of what I consider the best fuel for smokers. I think it is the same Mr. Heddon spoke of in *Gleanings*, No. 7, page 327. For four years I have been keeping bees, and I never used anything else, it giving me such satisfaction. I never tried to get anything better. Mr. Root says some one ought to supply this great boon to the apiarist. I would like for you to test the sample and pass judgment on it.

The sample is very good, and gives an admirable smoke, but no one would ever find it remunerative to supply the article at any price. The apiaries are very few in the United States the proprietors of which could be induced to purchase smoker fuel, and then the quantities wanted would be so very small that nothing but vexation would attend the traffic. We regret to write anything discouraging, but better that than delusive hopes.

◆

Selling Honey at Fairs.

The Tri-State (Ohio, Michigan and Indiana) Fair Association have made a new departure, in the establishment of a Traffic Department. From their circular for 1882 we copy as follows :

> With a view to the Traffic Department, no selling will be allowed in in the large and commodious main building, which will be kept for exhibition purposes only, but salesrooms or booths will be provided where all who arrange an exhibit in the main building or elsewhere in appointed places, can, for a reasonable rent, offer for direct sale on the grounds all manufactured wares of merit, or take orders for future delivery, under such rules and regulations as will guarantee square dealing, and protect both buyer and seller. The fine art hall is well adapted to purposes not only of exhibition but also sales, and artists will be at liberty to take orders for their productions, subject to delivery at the close of the fair.

A traffic department connected with each of the fairs and expositions will be a great benefit to all who are producing for market, as it gives opportunity for extensive effective advertising, and a splendid opportunity for exhibiting goods and wares. The traffic department has for years been a most important feature in connection with the English and Canadian fairs, and last year Mr. D. A. Jones' sales of honey at the Toronto Fair amounted to several thousand pounds, mostly in small packages, and at very remunerative prices. We hope bee-keepers throughout the United States will make it a point to be well represented at all the expositions and fairs offering the least encouragement, and force sales of pure, choice honey, upon consumers, and thus educate the public to its greater consumption. There should be much more honey consumed in this country, and with proper energy, a home demand can be created for our whole production.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

The Smoker Useless with Cyprian Bees.—The editor of the *Bee-Keepers' Guide* gives the following as his experience with the new race of bees :

> Our first season's experience with the Cyprians, revealed to us no very vicious peculiarities. They were restless and always running and queens hard to find, but last spring they seemed almost uncontrollable. We have one colony containing a high-priced tested queen with which it is difficult to have any dealing. We open the hive carefully and deluge the bees with smoke, and as it clears away the top of the hive will still be covered with bees trying to stand on their heads and whirling and maneuvering curiously. Then we carefully remove the side of the hive, and it becomes necessary to use more smoke. With the first frame removed, they renew the attack with fresh vengence and by the time the second frame is taken out we are covered with bees, feeling through clothing in a manner which must give satisfaction to them. They then travel up pant legs inside and out, into sleeves and bee veil, and we find it necessary to adjourn for comfort's sake.
>
> Should Cyprian bees be generally introduced throughout the country, smoke and fumigation will gradually drop out of the use of bee-keepers, as the Cyprian loses none of its activity when smoke is applied.
>
> We think that no bee-keeper should feel contented unless he is owner of one such colony. But in case he has a very near neighbor who keeps a sample hive and whom he frequently visits during manipulating times, it would be a convenient way to obtain a knowledge of them without giving up the body to sacrifice. Soon we shall all come to enjoy the gentler race.

Had Enough of the Cyprian Bees.—The editor of the *Bee-Keepers' Instructor* remarks as follows about his Cyprian bees :

We had one nucleus of Cyprians last season, and as our readers will perhaps remember, stated that we handled them without difficulty, and thought they were not so cross as many claimed them to be. But we take it all back, for we have found, since ours have bred up strong, that they always have an end for business. They are troublesome to handle, paying little or no attention to smoke, and boil over the hive whenever it is opened. They sting most unmercifully on the slightest provocation, while the mashing of a bee seems to set them wild. Strains of these bees may differ, but so far as our experience goes we want nothing more to do with them. From the limited experience we have had with them we fail to see that they possess any superiority over the most gentle Italians. True, they are very prolific, but so are many of our Italians. We have decapitated the Cyprian queens (we now have two colonies), and have requeened with virgin Italians, preferring to run the risk of getting hybrids rather than keep the Cyprians. Ours may be hybrids, and for that reason we do not wish it understood that we speak for the Cyprians in general, but only so far as our experience goes; although we believe it corresponds very closely with that of the majority of those who have tried the Cyprians. At any rate we will rest satisfied for awhile with our experience, not so much for our dislike of stings (as they effect us but very little) as the fact that they are too much like "Banquo's ghost"—they will not "down" when we wish to close the hive, no matter how much smoke we pour into them.

* * *

Fumigating Bees.—Mr A. Pettigrew, in the London *Journal of Horticulture* remarks thus on the above named subject :

Doubtless Mr. Raynor is correct in stating that fumigating bees with the smoke of Thyme and other substances is practiced in foreign countries, and his quotations put the matter beyond question. For aught I know the practice of using smoke to fumigate bees may have been known at an early date in Great Britain. But James Bonner, bee master, Auchencrow, Berwickshire, who wrote and published an able work on bees in the year 1879, does not appear to have used smoke or known of it in his day. Bonner's book fell into my hands for the first time a few weeks ago. After Bonner's day my father was perhaps the most extensive bee-keeper in Great Britain for many years. Both he and Bonner practiced artificial swarming without using smoke of any kind. How Bonner proceeded I do not know, but my father simply fixed a cabbage blade in front of his face, turned up his hives and drummed and drove swarms from them in the manner we now do with the use of smoke to prevent stinging. One autumn when my father was in Edinburgh selling his harvest of honey he met an Irishman, who offered to instruct him how to carry a hive of bees fully exposed up and down the streets without getting a sting, for a gill of whisky. The bargain was struck, and "the secret" thus obtained was worth all the whisky in the city to my father and to hundreds of bee-keepers besides, and doubtless to thousands of apiarists during the last 10 years. The use of smoke from fustian and corduroy rags makes bee-keeping comparatively easy and pleasant work ; and though I am courageous enough amongst angry bees with smoking rags in my hand, I would not like to undertake to swarm 50 hives artificially without the use of smoke. Without the least disposition to question the truth of what Mr. Raynor says about the use of smoke being known long before the Irishman's day, the probability is great I should never have known it, and never have been a bee-keeper at all, but for the Irishman and the gill of whisky in Edinburgh.

* * *

Equalizing Colonies.—The *Indiana Farmer* remarks as follows :

For the best results it is necessary that all colonies be made good and strong by the time the honey harvest begins. The frames of comb should be well filled with brood, and the hives full of bees. With only a few colonies, all seemingly in the same condition, we find some colonies will far outstrip others in brood rearing and be ready for the harvest before it comes. Frames of brood should be taken from the strongest and given to the weakest and in this way equalize the colonies before harvest commences. It will not perceptibly injure the strong colony, and will soon put the weaker one in working condition. In building up weak colonies by this method, it is better to do the work in the middle of the day, when the bees adhering to the combs can also be added as they will nearly all be young bees and will stay where put. In all manipulations of this kind first ascertain the whereabouts of the queen, so as not to transfer her with the combs.

* * *

Bees Gathering Pollen.—The *Grange Bulletin* remarks as follows :

A bee never gathers pollen from more than one variety of flowers on the same trip or visit. If so, why is there such a perfect sameness of color and appearance of both little pellets carried by the bee. We do not assert that all the bees gather and bring in the same kind of pollen at the same time, but that each bee gathers only one kind the same trip, and may collect various kinds during the day. It is also a well established fact that a bee never gathers pollen and honey on the same trip to replenish their stores with, but may gather pollen one trip and then bring in honey the next trip. How grand and wise has the Great Architect been in His distribution of knowledge to the little honey bee in the visiting of the various flowers for pollen which is so useful in the fertilization of the same in its most perfect order, producing perfect fruits and seeds of their special kinds in their seasons. Hence, we say study well Nature's grand laws as well as the habits of the little bees and manage them accordingly.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

July 25—Western Iowa, at Winterset, Iowa.
Henry Wallace, Sec., Winterset, Iowa.

Aug. 10—Maine State, at Harmony, Maine.
Wm. Hoyt, Sec.

Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.

Oct. 3-6—North American, at Cincinnati, O.
Dr. Ehrick Parmly, Sec., New York City.

5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

Tuscaruwas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

* * *

The National Convention.

The following is the official call of the Secretary, Dr. Parmly, for the Convention of the North American Bee-Keepers' Society. We hope there will be a large attendance :

The North American Bee-Keepers' Society will hold their 13th annual meeting at Washington Park Hall, Cincinnati, O., across Washington Park from the Exposition building. Time, Oct. 3rd to 5th, 1882. First session Tuesday, 10 a. m., Oct. 3. We are encouraged to hope that this will be a very profitable meeting, as we are promised papers from, and the presence of, a large number of our most prominent bee-keepers both in the United States and Canada, and essays and implements of the apiary are expected from abroad to add to the knowledge imparted by the research and inventive skill and methods of our countrymen.

EHRICK PARMLY, *Sec.*
New York, July 12, 1882.

* * *

☞ The bee-keepers of Boone Co., Indiana, are invited to meet in Lebanon, at Barton Higgins' office, over Jaskson's bee hive, on the west side of the square, to organize an auxiliary County Association, on Aug. 10, 1882.

GEORGE J. FREY,
ORA KNOWLTON, } *Executive Com.*
JAS. H. OREAR,

* * *

☞ The summer's meeting of the Cortland Union Bee-Keepers' Association, will be held in Cortland, N. Y., on Tuesday, Aug. 8, 1882.

M. C. BEAN, *Sec.*

CORRESPONDENCE

For the American Bee Journal.

A Day With Mr. Heddon.

WM. F. CLARKE.

Thursday July 6th, was a red letter day in my diary. It was at once the longest and shortest day of the year, lasting from 6 a. m. until 1:30 the following morning. In fact, like an old-fashioned New England Sunday, it began on the previous evening. Crowded full of bee and other talk, the hours were all too few, and too quick in their flight. It was a great mistake to appropriate only one day, however lengthened at both ends, for a visit with Mr. Heddon. I left Dowagiac feeling like the darkey preacher who had taken a hearty meal of dried apples, full to bursting. And the trouble now is to give, within any tolerable dimensions, an account of my visit.

Mr. Heddon is respectfully requested not to read the paragraph I am about to write, because truth and justice compel a strain of eulogy which may prove too large a dose of dried apples for his good. Welcome more cordial, and hospitality more hearty could not have been extended to me if I had been an own brother or first cousin. The glimpses of family life were very pleasant. Mr. Heddon writes well but he talks better. He is indeed a lively, entertaining, and instructive companion. During all those quick-flitting hours, the conversation never flagged, and when the engine let off its two toots for a start, the regret was that so much was left unsaid. I wish Mr. Heddon believed as I do in another life, because then there would be on his part, as there is on mine, a prospect of some time or other having a full chance of discussing to our heart's content, the many themes on which it was a delight to converse. I have set the question pump on many a human fountain in my time, but do not remember ever finding one so full and apparently inexhaustible as Mr. H. He has thought out every subject for himself—looked at its many bearings—and you can hardly suggest a phase of it which has not already occured to his own mind, been thoroughly canvassed, and assigned its due weight. In regard to bee-keeping, he is a living encyclopædia. What he doesn't know about it, is hardly worth knowing. Even when you cannot subscribe to his opinions, you are forced to admire the reasoning on which they are based, and the air of sincere conviction with which they are advocated. I felt it highly flattering to myself that we differed so little. N. B.—We did not discuss the pollen theory, having already done ample justice to that in the BEE JOURNAL. and finding so many other more pressing matters to talk about.

After an early breakfast, we proceeded to the apiary, which is located about a mile from Mr. Heddon's residence. It was a lovely summer day, and just in the thick of swarming-time. Mr. H., after full trial of all the methods of artificial division, has returned to natural swarming, as most sensible and experienced bee-keepers have done, or are doing. You get the most industrious colonies, the finest queens, and the best results generally on this plan. In a large apiary, it is less trouble than any known artificial method. Where only two or three, or some half dozen colonies are kept, it does not pay to watch all the live-long day for a solitary swarm. But in this, as in many other respects, amateur bee-keeping is a vastly different affair from bee-keeping as a business. The idea that if natural swarming is permitted there is danger of the bees going off to the woods, is contradicted by actual trial and experience. With trees, and especially evergreens, adjacent to the apiary, the bees are pretty sure to cluster close by. Mr. Heddon has an orchard on one side of his apiary, and a grove of "grubs" (dwarfish oak brush), on the other. The bee-yard proper is entirely clear of trees. There was a lively time of swarming all the forenoon, but, invariably, the bees either betook themselves to the orchard or to the "grubs." If two or more swarms rose at the same time, a Whitman fountain pump was used to keep them separate. The mimic shower diverted the swarms, and kept them from uniting. Hives being all in perfect readiness, the work of gathering and hiving was quickly done. Mr. Heddon uses no hiving poles, bags, or other ingenious devices. The bees are allowed to cluster naturally; shaken into a large and light willow basket lined with burlap with a cover attached also of burlap, which is quickly thrown over the basket full of bees; carried to the hive, and poured out in front of it; a board about 2x4 feet having a spread of burlap on it, being laid flat on the ground in front of the hive. A turkey feather and a big iron spoon are used to direct the bees toward the entrance, and *presto*, the grand procession is formed for their future home. Let me commend the use of that big iron spoon. It works well, better I think than the feather, where the bees are clustered thick, as it does not tickle and irritate. Of course, it must be handled gently.

Mr. Heddon's hives are prepared for swarms merely by being thoroughly cleaned, and filled with frames provided with wired comb foundation. Mr. H. uses the Given press for making his foundation, and it certainly does most excellent work both for brood frames and section boxes. He is a strong advocate for wiring, and I saw ample proof in his apiary that the bees do not object to it. With every sheet of comb foundation securely fastened in this way, there is no further anxiety when a swarm is hived, and no need to go through the newly formed colonies in a day or two to see if any of the foundation has broken down. I looked at hive after hive of bees that had been at work for a few days or a week, and prettier cards of comb I do not wish to see. But Mr. H. uses the finest of wire, and it is put in so skillfully, that the bees do not seem to know it is there. This is almost the only point in which Mr. H. departs from nature, in the management of his apiary, and certainly the results appear to justify his practice. There are many bee-keepers who seem to take a pride in forcing novelties on their bees, but Mr. H. is not one of these. It is his constant aim to find out natural law and harmonize with it as closely as possible.

Swarming is an O-be-joyful process, and it seems too bad that the bees should be deprived of the fun of it. They work prodigiously hard most of the time, can they not have one glad holiday in the season? With what a zest and a vim they settle down to housekeeping when their little shindy is over! I know no plan of artificial division which they accept cheerfully. They are glum, confused, sullen, and morose-like; slowly and reluctantly accepting the situation, and going to work at the bidding of a stern necessity, rather than under the prompting of a happy and satisfied energy. As Mr. Heddon watched the glee of the merry little creatures, listened to their joyous hum, and saw them settle down contentedly in their new and nicely furnished homes; he recognized the fulfillment of a natural law; while I, beyond this, recognized the wisdom and goodness of their and my Creator. We didn't quarrel over it, but I suppose each of us thought we had the best of it: I am sure I did.

Mr. Heddon uses the Langstroth hive for two reasons: 1st, he likes it best; and 2d, it is the most popular, consequently the most likely to suit purchasers. He runs his apiary mostly for comb honey, using the extractor in the rush of the season, as a supplementary affair. He thinks this plan lessens the labor of the bee-keeper, or rather spreads it over more time, as the section boxes can all be prepared before the busy season comes on. He is of the opinion that this method does not lesson the bee-keeper's profits. I think he has got the matter of section boxes down to a fine point. His plan, as all attentive readers of the BEE JOURNAL know, is to have tiers of single section box cases. His sections are $4\frac{1}{4}$ inches square. The cases are put on one at a time. As soon as the bees are fairly at work in one case, a second and then a third is put under it. His gridiron rack between the body of the hive and the cases work well. The bees fasten that, while the case is left readily movable. Mr. Heddon's principle is to let the bees do the heft of the work, while he superintends and regulates their industry. I think he is right. Many bee-keepers encumber themselves with a lot of needless work, which the bees are able and willing to do for them.

One of the chief points of my curiosity was that of seeing the leather-colored queens and workers of which we have read so much. I must own I have rather fallen in love with them. They are of large size, unsurpassed in industry, and by no means cross. Mr. Heddon does not breed for color but for business. His bees have three and sometimes four bands, but they are of a light brown, dusky hue. For years he has been cultivating strains that proved themselves the best workers, and is confident that he now has bees which gather largely from the red clover. He frankly calls them hybrids, and believes that there are strains of the German bee as good as any Italian, while the cross is better than either. He distinguishes between the brown and the black bee, a distinction that was new to me. His advice is to avoid the blacks altogether, as puny, irascible, and inferior workers. He kindly presented me with one of his average leather-colored queens, and she is now putting in her best licks beside my Italians and Syrians. I have no Cyprians. A colony of them that I had last year made my little apiary too hot for me.

Toward evening we took a drive into the country around Dowagiac. I was not favorably impressed with the bee-keeping resources of the region as I saw it from the village. But I got a different idea of it during our drive. The soil is a light, sandy loam. White clover luxuriates in it. Within a short distance of the village, basswood abounds. It is found on both high and low land, blooming early on the higher slopes, and later on the flats. The tulip tree, berry-bloom, and motherwort are abundant. Mr. Heddon has scattered the seeds of melilot here and there in waste places, and even around a large gravel pit, it is making a luxuriant growth where hardly anything else would flourish.

Mr. Heddon has the idea that even a good locality may easily be overstocked with bees. For the best results he would not have more than 50 colonies occupying one range. After that, though bees may do well, they will not accomplish their utmost in the way of honey gathering. The precentage of stores will be smaller. This opinion surprised me and awakened some incredulity, but I was not prepared to contest it, in the face and teeth of Mr. Heddon's large and long experience.

Mr. Heddon's success as a bee-keeper has been encouraging. Those who know him do not need to be told that he is not an over-sanguine man. Indeed he is apt to get the doldrums now and then, Occasionally he has been suspected of presenting the sombre side of the business too conspicuously. Still, his own career has been such as to awaken ambition in the mind of any enterprising youth with a short purse, and the world all before him. He is only in the prime and vigor of life, yet he has about all the comforts he can use to advantage. A good home, a nice wife, three bright and healthy children, an eligible village property, an apiary yielding a livelihood and some profit—how much I couldn't find out—a healthy business giving any amount of intellectual exercise, with occasional bits of enjoyable leisure, what more can a man desire? It has cost a large amount of hard work, and is the fruit of many years of steady perseverance in a chosen pathway not all bestrewn with flowers, but how many strive and toil just as much without these satisfactory results? The man himself is of course always an important factor in a career of success, and in no line of things is this more true than in bee-keeping. Without certain qualities, difficult of attainment, there is pretty sure to be failure.

Mr. Heddon does a pretty large supply business, but like others with whom I have met who are in the same line, thinks there is nothing in it. The business is too much cut up, and the competition too keen for a decent profit.

"We, us and Co." are not so formidable as I expected to find them. Mrs. H. beams with kindness and good nature, is a model hostess, but seems to think silence golden "before folks." Perhaps her spouse has the richer benefit, "all by his lone!" The children are too young to have opinions of their own as yet. The apprentices, two in number, would hardly presume to do more than ask information on bee lore from their experienced and able instructor. Fine, intelligent young fellows, they have indeed a valuable opportunity of acquiring the science and art of bee-keeping. I should like to have their chance myself for at least one summer, and would certainly try to get it, were I not parson and editor as to life-work, with bee-keeping as only a sort of by-play, or, as the ladies would call it, mere "knitting-work."

Listowel, July 14, 1882.

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Country Gentleman.

Apiarian Exhibits at Fairs.

W. Z. HUTCHINSON.

Considering how little has been done in the way of exhibiting apiaries, implements, products, etc., at fairs, the Michigan State Agricultural Society offers quite liberal premiums in the apiarian department. In regard to the premiums offered in this department by other State agricultural societies, I have no positive knowledge; I do know, however, that some bee-keepers have complained in regard to the meagre premiums offered by the agricultural societies of their respective States; but if larger and better apiarian exhibits were made, it is more than probable that larger premiums would be offered, and the list extended. The dealer in apiarian implements, the bee-keeper who rears for sale improved strains of bees and queens, and the producer of large quantities of honey, all find an excellent advertisement in a carefully prepared, tastefully arranged, and appropriate exhibition of their wares at a State fair. The well-known apiarist, D. A. Jones, sold several thousand pounds of extracted honey last fall, at a fair in Canada. The honey was put up in small tin pails and tin cans, and neatly labeled. The smallest package contained only two ounces of honey, and sold for five cents.

One great difficulty in exhibiting bees at fairs is that, if allowed to fly, they visit candy and fruit stands, and cider mills, causing so much annoyance that their exhibitor is soon told that he must either shut them up or remove them from the grounds. Perhaps the majority of the bees causing the trouble are from some neighboring apiary, but, as long as an exhibitor's bees are flying, the whole blame will be attached to them. To keep them confined during the journey to the fair, while it is in progress, and then on the homeward journey, is pretty hard on the bees; they become uneasy and many of them die. The only remedy is to carry the bees out each day, after the crowd has departed and the candy and fruit stands are closed, and allow them to fly. Here arises another difficulty; unless the bee-keeper waits until dark before closing the hive, the bees will not all have returned, while if he waits until the next morning before closing the hive, unless he is on hand "at the break of day," the bees will be out at work. There are two ways out of this difficulty; one is to get some accommodating watchman to close the hive after the bees have ceased flying, and the other is to carry a tent, bedding and provisions, pitch the tent upon the fair ground, and eat and sleep in it during the fair. By so doing, the exhibitor is always on hand to attend to his bees.

For the convenience and economy, many exhibitors whose almost constant attendance is required by their exhibits, prefer to live in a tent upon the grounds during the fair. An observatory hive—that is, one with glass sides—is necessary in exhibiting bees at fairs. In order that visitors may be gratified with the sight of a queen bee, it is well to have a single-frame observatory hive; that is, one just large enough to receive a single comb covered with bees. Of course, from one side or the other, the queen will always be visible, and sometimes may be seen depositing her eggs. The *British Bee Journal* for January contains a description of an excellent observatory hive for use at fairs. The hive is twice as long as an ordinary hive, and as it is only half filled with frames, there is space to move them apart inside the hive, and show the interior of the brood nest, the queen, etc. The frames are moved about by taking hold of narrow strips of heavy, folded tin that are attached to the ends of the top bars of the frames, and project through long narrow slots that extended the whole length of the upper side-bars of the wooden framework of the hive.

In a late number of the AMERICAN BEE JOURNAL are some excellent suggestions in regard to the manipulation of bees at fairs. Among other things it shows how a small space in one corner of a building or room may be divided off by means of a mosquito bar partition, and bees handled and exhibited, and the secrets of the hive disclosed behind the mosquito bar partition, while the crowd outside looks on without fear. The entrances to the hive are through the sides of the building. The only objection that I see to this plan is that, if allowed to fly, the bees trouble the candy and cider makers.

Comb honey for exhibition may be stored in section boxes of different sizes. The largest size should hold, perhaps, two pounds, the next size smaller, one pound, while the smallest has only one-fourth of a pound. To give the honey a "gilt edge" appearance, the outside of each section may be covered with gilt paper; and then the sections can be piled up in the form of a pyramid, with the largest section at the bottom and the smallest at the top; or they may be piled up into the form of a church, castle or whatever shape the taste of the exhibitor may dictate. In order to show how honey is sent to market, it would also be well to have at least one nicely finished shipping crate filled with sections of honey. By partly filling section boxes with properly shaped pieces of wood, so as to leave spaces in the shape of stars, hearts, letters, etc., and giving them to the bees during a bounteous flow of honey, the bees can be induced to build comb in the fancifully shaped spaces and fill it with honey. Such devices as these attract considerable attention fairs.

Extracted honey presents a fine appearance put up in glass fruit jars. Different sized jars can be used, and then arranged in some attractive manner. If candied, the honey could be exhibited in tin pails of varying sizes, and adorned with bright labels. A placard should be attached explaining the difference between extracted and strained honey; it should also explain about candied honey, how it can be restored to a liquid state by the application of heat, etc.

In making a display of beeswax, it might be caked in different sized vessels, and then piled up in the form of a pyramid. The largest cake might be made in a large tin pail, while the smallest might be run in the chimney of a small night lamp. Sheets of comb foundation can be shown just as they come from the mill; other sheets partly drawn out, and others fully drawn out into a complete comb. A placard should explain about comb foundation, what is is, how it is used, its advantages, etc.

The large implements used in the apiary, such as honey extractor, lamp nursery for hatching queens, bee hives, wax extractor and comb foundation machine, can stand by themselves upon the floor; while the smaller implements, like the honey knife, bee-veil, smokers and queen cages would appear to better advantage in a small show case. The display of bee literature would also look well if appropriately arranged in a show case.

Railroad companies charge nothing for carrying goods to and from the fair, and if the exhibitor carries a tent and boards himself, the expense of attending a fair is not great. I have a bee-keeping friend who made an exhibit at our State fair last year, and received more than $50 in premiums, while his expenses did not exceed $5. He lived in his tent during the fair. Another friend, who lived so near the fair that he could go home at night, received last year more than $40 in premiums.

Rogersville, Mich.

For the American Bee Journal.

Apicultural Professorship, etc.

JAMES HEDDON.

Mr. Editor: It was always my part to feast on ideas in print. If I could have but one way to get at a good lecture, hear it delivered, or have it on paper, I would take the latter way, unless the orator was of the first order. I always had full faith in our agricultural college, State chemists, and more than all the rest, the important chair occupied by Prof. Cook, viz, entomology. The gratis pamphlet issued by the State, through Prof. Cook, is worth its weight in gold to the farmer or gardener, if I am any judge.

If bee culture has a sufficient outlet for its products, to warrant our producing all we can, as a nation, then I hail the State apiary and Professor and Lecturer on apiculture, as great auxiliaries to its proper development. But right here, I want to say that this Professor must be a Professor of *practical* apiculture, not speculative. He must not only have had an apiary in his head, made up of hives that his contemporaries have written about, but he must have had experience, and plenty of it, with one or more apiaries of size. I want to say, that the knowledge and system needed for the successful management of large, special apiaries, is vastly different from that needed for the best management of 10 to 25 colonies. I wish further to give it as my opinion that specialists will raise the honey of the future. I suppose, at this time, hardly any one doubts the last statement. Those who may, have only to cast their eyes back over the past decade to verify the truth that just in proportion as specialty has taken the place of the Jack-at-all-trades system, have we been able to have the produced and manufactured comforts of life, at a price within the reach of all. Every day we hear some one exclaim, "Well, well, I don't see how that was gotten up for that price?"

Honey production has been going rapidly in the same direction, for the past 15 years, since I have been connected with the pursuit. I know some men are capable of managing two or more kinds of business at once, but I call any man a specialist who keeps and means to keep colonies enough to occupy his field completely. Say 85 to 150 colonies, spring count. This number of colonies need a very different management, to get the most income from the least outlay of combined capital and labor, from that which is best adapted to a few colonies, a point which I will try to clearly illustrate in an article in the near future.

In reply to J. V. Caldwell on foundation making, I will say that we have run two Dunham, one Root, three Vandervort, and three Given machines, and we know we can run off more sheets and more lbs. from the press than ever was run from any roller mill, as far as reported. When the sheets are off they are the same size they went on to the book, and the line is bulky and soft, and the base thin, and the bees work it much faster and into much more delicate combs than any rolled foundation I have ever made, or been able to get. I would like to have you find one of my students using any sort of foundation except Given, and they have made the experiments with me. I am aware that the Dunham, or any other roller mill can be set so as to run about as easy as a "clothes wringer," and it makes about as good foundation as the wringer, when thus set. The trouble with me was, I was trying to make foundation equal to the sample strips and pieces that had been sent me as specimen work. Well, perhaps I do not know of the best lubricators and methods of manipulation; I know I am not an expert mechanic. Let us know this truth, and let us couple with it the other truth, that we run off 271 sheets of thin Given foundation by one lubrication of the book. Machines that make first-class foundation with this ease, are valuable to the less expert. During the present season I have sold several thousand pounds of Given foundation exclusively, and many others have used and sold much more, and is there not someone who will step forward and tell how the Dunham, Vandervort or Root foundation surpassed the Given among the bees? It seems strange that some one has not spoken out from among the dishonest or mistaken, against this new foundation.

Last season I had a strong opposer of the Given foundation who had not tried it. "He would, though." He ordered about equal parts of Vandervort and Given, to the amount of about 150 pounds.; of both heavy and light. When he was, as I thought, under full sail with his experiments, I impatiently wrote for a verdict up to date. He replied (consistent with his former prejudices) that he thought he liked the Vandervort the best. I said no more. Neither has he. All I know further about his test is that early last spring he bought a Given press and book. Actions speak louder to me than words.

"Drones, their uses," by Dr. Baker interests me much. This Dr. B. has evidently not unwisely "entered the arena." As one of your readers, let me extend the right hand of fellowship to the Doctor. I think that in a way back number of either the Bee Journal or *Gleanings*, I took somewhat the same position as the Doctor regarding the possible use of the hitherto supposed "dead-beat" drone. Knowing but little about it, and being a honey-producer to the extent of the necessities of a growing family, and having but little time to experiment, I felt like leaving this theme to such men as Prof. Cook, who has done us such signal service on other and like problems of our pursuit. I do know that colonies do good work with no drones at all, as I have a majority on last year's full sheets of all worker foundation on wires, and I further know that some colonies do sometimes possess so many drones that they are nearly worthless as surplus honey colonies. In view of these truths, I am in favor of casting the drones entirely out of colonies that I dislike to have reproduce their like in my yard.

Mr. S. A. Shuck has asked me a question that I never pretended to be able to answer more than theoretically. I will say, however, that after reading his account of his manipulations carefully, I cannot see that either the bacteria or pollen theory are entirely shut out. I have always noticed that mixing bees of different colonies tended toward dysentery. I used to unite weak colonies in the fall (now I "take them up"), and they invariably had the dysentery first, and worst, as a class. One year ago last winter, I united three colonies into one only, and within 3 weeks they came out in front of the hive and soiled all about the entrance, and all winter long they laid out and buzzed and flew and mussed about, and while about two-thirds of all the rest of the apiary died with the same malady, this colony survived, "but it was a tight squeeze." I have in my possession a letter from a gentleman of undoubted varacity, who tells me that he calls to mind two or three instances where whole apiaries have died with dysentery during June and July. Strong colonies that were in apparently perfect condition in the morning, would show signs at noon, daub everything up at night, and before the next night were silent as the tomb.

Dowagiac, Mich.

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For the American Bee Journal.

Queens, Drones, Workers.

G. W. DEMAREE.

When a proposition pertaining to bee-culture or any other industry or science once becomes an accepted "fact," the tendency is to cease further investigation. Under such circumstances error may find a lurking place for a time.

From the earliest period of the modern system of bee-culture, those best qualified to speak intelligently have substantially agreed upon the following three propositions, and have accepted them as well authenticated facts, viz:

The queen is the mother of the colony, and has no other functions than to lay the necessary eggs, and to perform the queenly office, *i. e.*, the focal point of attraction resulting in what we call a normal condition in the hive.

The drone is the male honey bee—transient in existence, having no other function than to "mate" with the young queens.

The worker bees are undeveloped females, and perform all the labor pertaining to the economy of the bee hive, of whatever nature or kind.

Are the above propositions true? Of course I have no reference to the precise language which I have employed to state them, but substantially, are they true? I believe that the first and third have never been called in question, and the second not till very recently. If there is a bare possibility of a mistake as to the functions of the drone, the editor for calling attention to the subject in the BEE JOURNAL, of June 28, and Dr. J. R. Baker for his outspoken skepticism as to the truth of the proposition, so well expressed in his communication on page 437, issue of July 12, will deserve the thanks of all intelligent apiarists. Because if it should turn out that the presence of drones in a colony is necessary for other important purposes besides the very important one of fertilizing the young queens, why then, the somewhat expensive efforts to suppress and curtail their number by the use of all worker foundation, and the keen edge of the honey knife will sooner or later result in failure and ruin. But I assume that when a proposition has long been accepted as a "fact," the burden of proof rests on the shoulders of those who wish to controvert and overthrow it.

I hold that the function of the drone as stated in the above proposition, is as essentially necessary to the propagation and perpetuity of the race as that pertaining to the queen or workers. The mere fact that the office of the drone is limited to the one act of impregnating the queen, by no means makes him a "dead-beat libertine." He who created them "male and female," also assigned to each its functions, and both alike are legitimate. The drone, though quite gay in his season, is nevertheless an exceedingly modest insect, as I have learned, to my disappointment and disgust while prosecuting my experiments to discover a method to "mate" queens in confinement.

The short, gay, and seemingly useless life of the drone is in perfect harmony with the "eternal fitness of things." The duties of his office are few and alluring, but fraught with dire consequences. He sips the precious nectar for which he labors not, but he enjoys the feast at the sufferance of others. He basks in the balmy air and sunshine, but he returns to a home to which he can lay no claims, and is powerless to assert his inherent rights. Thus he flits through life till *functus officis* and speedily falls a victim to the monster so much dreaded by all animate nature.

I wish to remind Dr. Baker that "nature is wonderfully profuse in her ways." It is no harder to account for the superfluous number of drones reared under favorable circumstances than it is to account for the fact that the atmosphere is literally loaded with pollen at times, when its chief office is to fructify the comparatively few seeds of the vegetable kingdom. No one colony of bees needs, or wants, or will tolerate more than one queen, yet I have removed more than 50 well developed queen cells from the combs of a single colony. Is this not also "marvelous?" I think that the facts which I have just cited are a fair offset to the argument based on the instructive tendency of bees to rear a superfluous number of drones.

Now what is our experience? I have made it a rule for years to test by actual experiment the truth or falsity of every important accepted proposition in bee-culture, and discover more if possible. In order to improve my colonies of bees, I have been in the habit of encouraging some colonies to rear an abundance of drones, whilst other colonies were not allowed to have any drones at all. With this state of things in an apiary, it is not difficult to learn what part of the programme the drones fill best. They are liberal consumers, and that continually. No matter how crowded the colony may be for room, you will never see the "gentlemen" hanging on the outside with the workers; they could not be induced to leave the well filled cells for such cold comfort as that. Nothing will move them but the habit of their afternoon flight or the poured out wrath of the ireful workers. But I tried an experiment last season that settled the matter to my own satisfaction at least. I kept a drone laying queen at the expense of about 50 lbs. of honey. I found that the queen was able to keep the hive stocked with drones in exact proportion to the number of worker bees I supplied her with, from other colonies. She could do no more than this, and did no more.

To sum the matter up in few words, I have found that when there is a generous flow of honey, the honey-storing capacity of colonies with and without drones, is much the same, but when the flow is light, there is all the difference in favor of colonies that have no drone consumers.

Christiansburg, Ky.

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Iowa Homestead.

Increasing Bees by Division.

O. CLUTE.

If, from any cause, a colony of bees be deprived of its queen at a time when there are in the hive worker eggs, or worker larvæ not more than three days old, the bees will at once proceed to rear queens from these eggs or larvæ. To do this they enlarge the cells around a few eggs or larvæ, say from 5 to 12, and feed the young bee on the royal jelly, then, instead of growing into a worker bee it grows into a perfect female, or queen, eight days from the egg this young queen is sealed up in the cell to undergo the final transformation. It remains sealed in the cell about eight days, and then comes out a full-grown queen, perfect in all its parts. But it has not yet met the drone or male bee ; it is not yet fertilized.

If the weather is warm and pleasant the young queen, on the fifth day after hatching, will fly out in the air, on what bee-keepers call "her wedding journey." She meets the drone, copulation takes place, and she returns to the hive a fertilized queen. She never leaves the hive again unless she accompanies a swarm.

Suppose, now, that a bee-keeper desires to increase his bees by dividing. In warm weather when honey is coming in, and when the hive is quite populous with bees, he takes an empty hive, goes to the colony he wishes to divide, smokes it, opens it, takes out half the frames and all the bees that adhere to these frames, puts them in the empty hive, and then shakes a large part of the bees from two or three other frames into this new hive, and also in some of the frames left in the old hive. He now removes the new hive to the place in which it is to be left.

Now, the queen of the old hive may be left in the old hive, or else she will be in the new hive. Whichever has the queen will be all right, it will go on as if nothing had happened, only it will have fewer bees. The hive that has no queen will have eggs and larvæ, and from these the bees will proceed to grow a queen, in the manner mentioned above. When the queen is grown and fertilized that colony will be all right.

This method of increasing swarms was formerly quite widely practiced. But it has important disadvantages, which have led the best bee-keepers to reject it in favor of the nucleus system.

For the American Bee Journal.

Bee-Keeping, and What?

EUGENE SECOR.

There is an old saying to the effect that one should not carry all his eggs to market in one basket. That would seem to hint that the pursuit of the specialist does not, as a rule, bring the most enjoyment, or is not the most profitable. Yet, specialists are benefactors of the race. When a person devotes his life to the development of one theory, or to the perfection of one practice, he ought to, and very often does, do much toward perfecting that branch. But mankind needs rest, recreation. It is necessary to the best development of both mind and body. A diversity of labor is restful. It takes the mind out of the rut. Besides, it broadens a man to think of more than one subject. A person can hardly be said to be educated who knows but one thing.

While it is true that bee-keeping may be made remunerative as an exclusive business, yet is it not better for the average bee-keeper to diversify employment by joining with it some other industry? If you answer yes, then what other employments naturally and profitably go with it?

Bee-keeping in the past was almost exclusively carried on by farmers. This is one reason of so many failures. They did not require a rest of this nature. Their labor was diversified enough already. Because a man is a good farmer, is no reason why he is adapted to this business—in fact, is a reason why he is not. If he delights in his growing crops, if he wants to spend all of his working hours in the field, he will, generally, be too far from his apiary, and too tired when the bell rings for dinner, to give his colonies the needed attention. The hurry of spring work and the exhaustive labors of the summer will, in most cases, cause him to neglect the very little, but very necessary attentions which the bees require at these seasons, to make the balance on the right side of the ledger in the fall. I would not try to discourage farmers from keeping bees ; but, unless they are adapted to it by nature—unless the bent of their minds is toward the details—the little things, and unless they possess energy enough to do the right thing at the right time whether tired or not, they can sweeten their pan cakes more cheaply with glucose than with honey of their own production.

Horticulture is a business which is well adapted to go hand-in-hand with apiculture. The fruit blossoms are among the first flowers in spring to gladden the busy toilers of the hive, and they, in turn, render the fruit-grower valuable assistance in the perfect fertilization of the flowers, without which a crop of fruit is impossible. Bee-keeping and fruit-growing are well calculated to go together, also, for the reason that everything can be under the eye of the proprietor. And again, the same qualities of mind are necessary in either case. The little things are looked after. Nothing is too insignificant to receive attention at the proper time. The love of study and investigation is developed by a continual association with nature's choicest productions. What more fascinating, and at the same time remunerative, employment could engage the mind of man or woman, than these combined? There are few towns in the United States, outside the larger cities, where the markets are fully supplied at all seasons with either fruit or honey. These home markets ought to be supplied by home production. There is money in the business. Look at the tin cans piled in every back alley in all our villages, which have come to us filled with products that ought to be raised at home, giving employment to the idle, bread to the hungry, and pleasure to both producer and consumer.

Another occupation that, in all country places, could well be located by the side of the apiary is blacksmithing. What pleasanter recreation, when resting from the labor at the anvil, than to watch the busy workers that never seem to tire, as they come in laden with the nectar that rejoiceth the heart of man, yea, that maketh his bones fat? When the heat of the day and the added heat of the forge drives him to seek the cooling shade, how delightful to contemplate that his assistants in labor are only too glad of the sunshine to increase his and their treasures. My grandfather, who lived before the Revolutionary War, was a blacksmith, and one of the most successful bee-keepers of that period. The shop and the apiary divided his time. He kept from 50 to 75 colonies, and sold honey for 5 and 6 cts. per pound.

There are many other occupations that might be profitably and pleasantly coupled with bee-keeping, if the taste of the person leads him to habits of thought and study.

The minister may find respite from sermonizing, while he pursues, for an hour a day, the study of nature, through these the most interesting and instructive of nature's works. And to the credit of the profession be it said, that foremost among the bee masters of the world, stand the names of clergymen.

The lawyer might find it easier to return to his "brief" after an hour spent in the open air among the "free commoners." His clients would not suffer by reason of his rest.

The doctor could afford to study the wonderful mechanism of *apis melifica*, and the medicinal virtues of honey, and if, in consequence, he should prescribe more honey and less pills, nobody but the pill-makers would suffer.

The student could master the sciences just as well if master of the science of bee-keeping, and the relief from his daily task would be as complete as though he played base-ball or pulled an oar.

Space will not permit me to enlarge further on this subject at this time. Various are the employments with which bee-keeping would alternate as a recreation to the benefit and happiness of all interested.

Forest City, Iowa.

For the American Bee Journal.

Questions about Honey Plants.

WM. PAXTON.

Mr. Editor :—I enclose for name three honey plants which I value in order as numbered, though on longer acquaintance I may reverse it for want of a better name. I call No. 1 snowdrop. It grows wild and quite abundant on the Big Sioux and Missouri bottoms. No. 2 we call vervain ; just coming into bloom ; is a long and continuous bloomer and much visited by the bees. No. 3 I met for the first time while picking the other specimens, and call it the welcome stranger. It is a single plant growing in a hog lot, about 4 feet high. Finding bees on a single plant growing among a profusion of milkweek and snowdrop, attracted my attention, and since picking the specimen it occurs to me I may have found the highly lauded Simpson honey plant. If so, how can I best propagate—scatter in hog lot, waste places, or in a grove. In this land of wild flowers only, the honey harvest is late. My bees have only kept healthy brood-rearing up to July 4. Since then they are very busy. Some basswood a mile away, milkweed and snowdrop plenty. Last season I think my bees were more advanced, and thought rape their best pasture. This season rape is not so plenty, and seems to yield poorly. Of white clover I found a single plant by the railroad switch, not larger than my hand, last spring. It grew to a clump 3 feet in diameter, and many seedlings appeared. This spring it grows and blooms finely, and my bees take to it as if an old acquaintance. I have nowhere seen white clover grow more luxuriant or abundant than in Eastern Iowa. It beats Ontario badly. Even the famous Canada thistle thrown in, will scarce equal it. If this region proves equally good, and the present small start would indicate it, then with additional groves for shelter, we will have a good honey region. In May I divided my strongest colony to receive a queen just shipped. She came dead, and since then I have changed the queen weekly, and have two colonies as strong as any in the yard. I had another queen shipped from Indiana on the 26th of June. She came on the evening of July 3d, and also dead. Why the queen should be over a week, while the card announcing the shipment came in less than 3 days is what I cannot understand.

N. W. Iowa and S. E. Dakota.

[1. *Symphoricarpus* occidentalis, or wolf berry.

2. *Verbena stricta*, or mullein-leaved vervain.

3. *Scrophularia nodosa*, or figwort (Simpson honey plant). This latter yields an abundance of nectar, but is very attractive to wasps as well as bees. It is curious to note that on such a plant the bees usually work downward, while the wasps visit the lower flowers first, then the higher in order.—T. J. BURRILL.

We do not know the better method of cultivating Simpson honey plant. Perhaps some of our correspondents who have experimented with it, will give full directions through the BEE JOURNAL.—ED.]

Rural New Yorker.

Practical Hints in Apiculture.

PROF. A. J. COOK.

It is the object of this paper to call attention to a few practical questions in apiculture, which, in the opinion of the writer, are not sufficiently considered even by many of our best bee-keepers.

POOR QUEENS.—How often do we notice, in reading the reports of bee-keepers, that some colony in the apiary gave results that far eclipsed those given by most of the others; while others seemed to gather but little more than their own needs required. Every attentive apiarist who observes closely, has noted the same fact in his own experience. The conclusion is obvious: some queens are superior, while others are practically worthless. The most successful cattle breeders, even with the best breeds, find that to achieve the best results they must continually weed out from their herds, selling off those that vary from the highest standard of excellence, and valuing above price some members of their herds. Bees are no exception to this law, and that apiarist is most wise who closely watches his bees, killing the poor and worthless queens that are sure to appear, and supplying their places with others reared from queens and, so far as possible, mated to drones, which are the descendants of the choicest queens in his bee yard. My first advice then is: Don't retain any but the very best queens. Constantly improve, by the most severe selection, the quality of your bees.

STIMULATIVE FEEDING.—It is well known to all students of apiculture that have had experience with Italian and German bees, that breeding ceases whenever the bees fail to find honey. But to keep the colonies strong we must secure continuous breeding, which can be secured by feeding a little each day whenever breeding ceases from a failure of the honey harvest. Neglect of a little thoughtful care in this direction takes largely from the pockets of our bee-keepers. With the new Syrian bees this seems unnecessary, as they breed continuously irrespective of the honey harvest.

STRONG COLONIES.—Another great error consists in tolerating weak colonies in the bee yard. The heading of this paragraph is the golden rule in apiculture, in spring, in autumn, indeed, at all seasons; if neglect has brought weak colonies, unite them, as weak colonies give no returns, and are sure to fall an easy prey to the bee moth, to robbers, and to the other ills that stand in the way of success.

INCREASE OF COLONIES PREVENTED.—To secure strong colonies, preparatory to a large yield of surplus comb honey, and not to thwart our own plans by inducing the swarming fever, has been the sore puzzle which has confronted most bee-keepers. True, this is usually accomplished by proper care to ventilate, to shade the hive, and to so increase the space within the hive that the bees shall not become discontented with the old home and essay to move out into a new. Yet who has not found that, despite all these precautions, the bees will sometimes reject all overtures in their mad fury to move into new quarters? In case this inordinate desire to swarm is manifest, there is still a way to satisfy the bees without lessening the working force in the hive. If the bees seem determined to swarm usually there are several cases: if there is one, let the first swarm be placed in a new hive. When the second swarm—I refer to a swarm from some other hive—comes out, it will likely be on the same day; put this in the hive that swarmed first, after having destroyed all the queen cells in that hive. This colony is just as strong now as it was before, in brood and bees, and the bees will be satisfied to settle down to work in the sections. A third swarm can be put in the hive from which came the second swarm; a fourth into the third, etc. We thus have increased but one, have satisfied the bees and still have kept all the colonies strong. If desired, at the last we may unite the swarm that issued first with the young bees and brood left in the hive from which issued the last swarm, in which case we have not increased our number at all. If we now give plenty of room there will be no further attempt to swarm, and we are almost sure to secure the best results in surplus honey.

Lansing, Mich.

For the American Bee Journal.

Do Bees Void Dry Excreta?

C. N. ABBOTT.

This subject appears to be still one of uncertainty, if I may judge from a letter by Wm. F. Clarke, on page 374 of the BEE JOURNAL; but any one having a doubt on the matter may in a few hours satisfy himself that bees do void dry, *i. e.*, solid excreta, if he will take the trouble to do so.

Let him take a clean, new box, about 15 inches square and 9 inches deep, and hive a 3-pound swarm of bees in it; when they are quiet, let him reverse the box and cover the top with a sheet of perforated zinc, or with open strainer canvas to prevent the bee's escape, let him now take the box of bees, with the zinc or canvas side uppermost, to the nearest railway station, and send them a journey of about 40 miles out and home again, and if, after returning the bees to their hive, he does not find thousands of grains of dry excreta on the bottom of the box he may conclude that I have deceived myself, or that I am an imposter. The test is a very simple one, and I can but wonder that it is necessary to suggest it in a land where bee-culture is so largely developed.

Mr. Clarke does not agree with me that "protracted confinement" produces "dysenteric symptoms," but I hold to my assertion, the conditions being as stated by me, viz: when bees are confined to their combs during a 24-hours' journey by railway. I have dealt with many hundreds of purchased colonies and swarms, but I have never set a full colony out after a long journey without very decided evidences of "dysenteric symptoms" exhibiting themselves, and I believe them, in all such cases, to be the perfectly natural outcome of a physiological condition of things which seems to have escaped the notice and the cognizance of otherwise the best bee-keepers in the world, to this date. I say "the cognizance" because, although I have many times, in the *British Bee Journal*, which has a world-wide circulation, alluded to the fact, no one appears to have recognized it, though it presents a subject for investigation as to muscular developments and uses, such as doubtless many of our (and your) great bee anatomists would take delight in investigating.

My standpoint is: Bees can only void their excreta naturally when on the wing. I do not put this forward as a theory, but as a fact, and upon it base a theory that the construction of the bee is arranged to that end, that its home under ordinary conditions should never be fouled. Herein is a very great deal more than appears at first sight, but I venture to assert that if sought out faithfully and well, it will be found that the muscles that give the power of flying, govern in a sense the power of discharging excreta.

Mr. Clarke does not believe "that protracted confinement produces dysenteric symptoms if the bees are in such a state that they can void dry excreta," which is equivalent to saying, one cannot be frozen, and boiling hot at the same time, but transition from the one state to the other may be so rapid under certain conditions that it is easy to assume, and to prove, also, that bees that at one time were capable of voiding dry feces, would become dysenteric after very slightly protracted confinement under other conditions. Twenty-four hours' confinement to full combs, on a railway journey, being considered "*protracted*" in the one case, while twice 24 days' quiet confinement through stress of weather in a hive "well found," would but be talked of as a nice time of natural rest for the bees.

Mr. Clarke further says, "when we have discovered the conditions under which bees discharge dry feces only, we shall have solved the problem of successful wintering," and to this I in a measure agree, and in the meantime claim to have discovered one of those conditions.

Of my position in regard to this matter, though hailing from England (the old country, where so little is supposed to be known of bee-culture by the majority of American beekeepers), I am as certain as I am that the sun will be in the meridian at noon to-morrow; but lest I might be "tripped," through not bringing all my arguments to bear at once, I forbear enlarging for the present, and hope my American friends will believe, as is most true, that my object herein is for the general common weal.

I thank Mr. Clarke exceedingly for making the opportunity for me to offer this contribution to apiarian science, and which, if thought worthy of notice, I trust will be discussed in the kind spirit in which he opened the question. I think, with him, the matter is not of curious interest only, "but highly practical," and I await with respect the opinions of American experts on the proposition.

Fairlawn, Southall, England.

A Sample Copy of the Weekly Bee Journal will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

SELECTIONS FROM OUR LETTER BOX

Bees Going into Other Hives.—1. What is the reason that bees when they swarm sometimes go into another hive with other bees. We have one hive in our apiary that seems to be the center of attraction. Three large swarms went into that hive, and we had to put another hive on top of it. 2. What can we do? One colony that we left a few days and then put on the second story does not work good, while the colony that we put the top hive on right away is working nicely. 3. What reason is there for this? Bees are gathering lots of honey. Three colonies have brood in their honey-boxes. 4. Would it be best to take off brood and all? We have 28 colonies, and have realized about $100 this year selling honey at 20 cents per pound here. Clover will stay about 2 weeks yet, and with basswood late swarms ought to gather enough to winter on. If they fail, I will lose a number. 5. What do you think about late swarms?

S. T. WOOLWORTH.

Gratiot, Wis.

[1. Probably for the reason that their scouts have found that hive but illy guarded, have effected an entrance and inspected the premises, and reported favorably. It is not of unfrequent occurrence for succeeding swarms to follow the same course as their predecessors, even to clustering in the same locality.

2. Let them stay, as there is probably but one queen now.

3. The reason may be from one of many causes. An examination inside the hive will reveal it.

4. Yes, and extract the honey, then give a fresh box.

5. If not too late to breed young bees and lay up stores for winter, they will do for increase, but not for surplus honey gathering, unless frost holds off quite late, and fall bloom is very abundant.—ED.]

Behind Time.—We have had a backward season in this section for honey. Every blossom is from 10 days to 2 weeks behind time, and such a slaughter of drones never was seen the middle of June. The 1st of July brought plenty of raspberry and plenty of swarms. It is now time for basswood to open, but that is backward also. This section is getting to be a great place for buckwheat—about 200 hundred acres within reach of my apiary. But some folks do not like buckwheat honey; well, suppose they do not, it certainly is good enough to put on buckwheat cakes.

WM. C. CASSON.

Addison, N. Y., July 13, 1882.

Queen Cell from Fertile Worker.—Did any person ever have bees with fertile worker build queen cell and put the larva of a fertile worker in the cell, and rear a queen; if so, was she a good queen? Give her quality and size, and did she mate with a drone? I have one now in a capped cell. My bees are all in splendid condition, although the weather is extremely cool, or warm, or wet. The white clover was never better. Prospects for a fall crop of honey are splendid.

R. M. OSBORN.

Kane, Ill., July 17, 1882.

[With plenty of leisure on your hands, and an inquiring turn of mind, we hope you will institute a series of experiments, to see what will be the result of your capped queen cell with fertile worker larva. If the drones are not objectionable, why not devote the colony to experiments, and, if necessary, destruction?—ED.]

Mr. Shucks' Problem.—With Mr. Shucks' bees (see BEE JOURNAL, page 444) they were so much excited by the general mixing up that they did not get over it until they had gone long without food and dysentery was brought on. Bees will not eat in a worrying condition. I have had bees have dysentery after 5 days' fasting, but food cured them; quite cured Mr. Shucks'.

E. B. SOUTHWICK.

Mendon, Mich.

[Our experience has been, that when bees are greatly disturbed is the exact time when they eat most. We have found this the most serious drawback with the Italians for extracting, for, if they are badly frightened and the second shake fails to free the comb from them, they immediately plunge into the cells after food, and it is a somewhat troublesome task to brush them out with the feather.—ED.]

Rearing Drones.—I have one colony of black bees, and am getting an Italian queen, and, as I can sell a few queens this fall, would like to know—1. Can I compel the bees to rear some drones (the blacks have already killed off their drones around here) by feeding? 2. If I make some nuclei to rear queens, can I double them back so as to winter? Bees are doing very little here this season—too cold and wet I suppose.

Houghton, Ont.

S. T. JACKSON.

[1. If a young queen, you will have difficulty stimulating drone-rearing this season, and for your climate could not get them in season for testing progeny this fall.

2. There is no trouble in doubling up; but you would be obliged to keep the nuclei constantly reinforced with brood, or the bees would be too old for effective wintering.—ED.]

Fertile Worker.—I send you by mail a small piece of comb, lately taken from the hive of a neighbor. The queen, with nuclei, had been out of this hive for about 6 days only. You will find many eggs in the same cell. Is it a case of fertile worker? An answer will confer a favor on your correspondent. Does this number of eggs in one cell indicate a fertile worker? Is there any sure indication?
PHIL REARDEN.
Jamestown, Col.

[If the colony was queenless six days, and you then found eggs in and near the center of the brood-nest, it was a pretty sure indication of fertile workers; and the fact of several being in each cell, is corroborative of there being several. We believe that those conditions which induce the development of a single fertile worker will also develope a plurality, so that there is the same probability of half a dozen, or more, as one. We have had young mated queens, when first commencing to lay, deposit from one to four eggs in a cell; probably because other cells were not properly cleaned out in time for their use. These, however, were in each case thinned down to one in a cell by the bees; the extra ones, probably, being put in other cells as fast as they were ready.—ED.]

Anticipations Realized.—Bees are doing exceedingly well. I am fully realizing my most enthusiastic anticipations. Everything indicates an uninterrupted flow of honey until frost comes. PHILIP P. NELSON.
Manteno, Ill., July 17, 1882.

Comb Foundation.—Bees have been doing very well here for the last month. Swarming in some cases has been excessive, and colonies are getting in good shape for winter. This is the first year that I have put swarms on foundation, and I find that it pays well. We will get very little surplus honey this season; but we have a large crop of wheat now harvested and ready for the separator, a tolerable crop of hay secured, and the corn growing finely. Farmers are happy. ISAAC SHARP.
Waveland, Ind., July 15, 1882.

Only Fair Weather Needed.—Bees are breeding rapidly now, but it is too cold for surplus. Magnificent white clover bloom, and all we need is good weather for the boom to reach us. Linden will open in two or three days, and is very promising. With fair weather the fall run cannot fail to be immense. Your JOURNAL is hailed with pleasure, and is an invaluable adjunct to every apiarian establishment as well as to the amateur. Have 35 colonies; first swarm to-day.
L. S. BENHAM.
Alma, Mich., July 18, 1882.

Pasturage for Bees.—We have had the worst season for bees I ever saw—too much rain, wind, cold, late frosts, etc. I sowed in drills some mignonette and cleome, but the latter did not grow. I cultivated most of the mignonette until harvest, and it did well early, but since I quit cultivating the weeds and grass have choked it so badly that it is doing no good. The sweet clover I cultivated is fine, but the crop is so badly choked up and spindling, it is of no account. We have some motherwort and I like it well, but am not satisfied. For a general crop will it spread if sown broadcast on good, rich timber land? If sown early in the fall, on well-prepared ground, will it thrive and bloom the next year? I never knew any planted; it grows spontaneously here in rich fence corners.
A. MCKNIGHT.
Bible Grove, Ill., July 15, 1882.

[It ought to do well if sown broadcast, provided there is not too much timber. We planted some two years ago in the fall. It blossomed the following season, and is doing well yet. —ED.]

The Honey Harvest.—The honey crop here is an entire failure. The present season has demonstrated that there are other important prerequsites to a good honey yield, besides plenty of bloom. The latter condition has been present in profusion, but there has been but little nectar secreted, and less weather suitable for bees to have collected it. I have taken with the extractor a few gallons of honey, too thin for any use, and there has not been sunshine sufficient to evaporate it. There is still plenty of bloom, but continuous rain keeps the bees at home. My bees have not been busy in the fields two whole days at once, at no one time for weeks. The wheat and oats crops are better than they have been for years. The growing corn crop looks promising now, although much of it did not get the work it needed on account of the wet weather. Much of the tobacco crop is submerged in weeds and grass; much of it will be entirely abandoned and lost. G. W. DEMAREE.
Christiansburg, Ky., July 17, 1882.

Silver Linings.—After many fitful struggles the clouds have lifted and the silver linings glimmer over our house. Never before in the history of 30 years have I had to feed my bees in the month of May, but it is bread cast upon the waters, for those fed most are now returning the largest surplus, and I see no good reason why the honey season should not continue till Jack Frost nips the flowers.
J. W. BAYARD.
Athens, O., July 17, 1882.

Prospect Very Poor.—Up to this date bees appear to have gathered no honey from white clover. A good deal in bloom, but yields none. Prospect for honey very poor.
W. D. FOOTE.
Johnstown, N. Y., July 13, 1882.

Still Hoping.—The season has been very poor so far. It has been too cold and wet. Not one pound of surplus yet, and only one swarm, but if the weather keeps dry and warm I think we will get something yet. There is plenty of white clover. Basswood has a good appearance and will be out in about two weeks. A great many bees have died this spring. Nearly all of the loss was caused by starvation. Bees here are mostly kept in box hives. We have 43 colonies in Langstroth hives, double-wall. Lost 3 colonies this spring.
DICKSON BROS.
Lancaster, Ont., July 15, 1882.

A Large Honey Harvest.—My bees are doing well. I have about 25,000 pounds of honey extracted up to date. I would have had more, but two of my men are down with the fever. The weather has been unfavorable for the bees for the last few days. As soon as it clears off I will extract about 2,000 to 2,500 pounds per day. There are about 300 of my colonies that need extracting, which will give me from 4 to 6 gallons each this extracting.
L. LINDSLEY.
Waterloo, La., July 11, 1882.

A Peculiar Season.—This has been a very peculiar season here. The commencement of clover bloom, about June 10th, found bees very weak in numbers. Clover has given a good yield ever since that time, whenever we would have sunshine long enough for the grass to dry off; but sunshine has been the exception—not the rule. So far, bees have not been able to work over one-third of their time, and, of course, the amount of surplus honey is small. Colonies are more populous than they would have been if the honey flow had been heavier, and a fair yield can yet be obtained if we should have good weather the rest of the season. O. O. POPPLETON.
Williamstown, Iowa, July 15, 1882.

Exasperated.—MR. EDITOR: Your serene hopefulness is simply exasperating to bee-keepers who have not taken a pound of honey this season, and have fed the bees in May and part of June to keep them in condition. I think you will find those districts, *which make a crop*, to form the exception, and not the rule as you put it. Our only hope now here is the fall crop, and if the weather remains as it is (which is more than likely), we may have to feed for winter.
T. H. KLOER.
Terre Haute, Ind., July 18, 1882.

[Our correspondent has our sympathy in his disappointment; but if the mere recital, by the BEE JOURNAL, of general prosperity is so exasperating, with what bitter hatred must he read Mr. Nelson's cheerful letter in the first column of this page. We once heard of an old lady whose grandchildren had the mumps, but remarked, philosophically, "La, we don't care while the neighbors have measles."—ED.]

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" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
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Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

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☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

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Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

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Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

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☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

◆

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 24 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.
BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.
AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for honey is quiet. Extracted brings 7@10c. on arrival. No comb honey on the market worth mentioning, prices nominal.
BEESWAX—Scarce, and brings 20@25c. on arrival.
C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey is light, prices being made to meet views of purchaser.
BEESWAX—Scarce, and in demand at 23@25c.
R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—White clover, fancy, 1 lb. bxs., 15@16c.; white clover, good to choice, 1 and 2 lb. bxs., 13@14c; buckwheat, 2 lb. bxs., per lb., 11@12c. Extracted and strained, white, 9@10c; dark 7@8c.
BEESWAX—The market continues rather quiet, but the supply is light and prices firmly sustained. Western, pure, 25@26c.; Southern pure, 26@27c.
D. W. QUINBY, 105 Park Place

CLEVELAND.

HONEY—Comes in very slowly, and is readily sold at 25c. per lb. for 1 lb. sections. No larger sections received yet. Our experience in the honey trade for the past 25 years, teaches that during the whole year there is no better sale for honey than August and September. The demand at this time is greater and prices as high as at any time during the year, especially for comb honey. Extracted probably sells better later. No extracted has thus far been received, but it could be quoted at 10@12c. BEESWAX—25@28c.
A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—Not much arriving, and most of that is held above buyers' views. Some very white comb is offering at 16c. Buyers refuse to name more than 8c. for extracted of the choicest quality, but there are some lots of excellent body, color and flavor, which are limited at 9c.
We quote white comb, 15@29c.; dark to good, 8@12c. Extracted, choice to extra white, 7¾@8½c.; dark and candied, 6@6½c. BEESWAX—23@25c.
STEARNS & SMITH, 423 Front Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.
BEESWAX—Prime quality, 25c.
CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—New Texas comb (when the combs are perfect) brings 20@22c. Quote strained at 8@10c.; extracted at 12c. per lb.
BEESWAX—Prime in demand at 24@25c.
R. C. GREER & CO., 117 N. Main Street.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

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THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

AT LULING, TEXAS.

I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.

14w39t **J. S. TADLOCK.**

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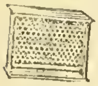

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

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Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

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From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book.

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To avoid mistakes, the name of the shipper should always be on each package.

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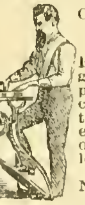

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Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

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AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited and published by

C. N. ABBOTT, Bee-Master.
School of Apiculture, Fairlawn, Southall, London.

☞ We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 per annum.

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A Fortnightly Journal of

Agriculture, Horticulture and Rural Affairs.

Edited by W. F. CLARKE, and

Published at 5 Jordan street, Toronto, Ontario. Canada, at $1.00 a year, by C. Blackett Robinson, Liberal inducements to local agents. 44mtf

Old Headquarters for Queens.

We will be prepared on and after July 10th, to ship Queens by return mail. We have the best strain of Italians in the country. Our Cyprians, Holy Land and Hungarians cannot be excelled. No 75 cent or dollar queens for sale. Warranted Queens $1.50, Tested $2.00, very choice Selected Queens $1.75 each. We also have dark and extra light-colored Italians. All Queens warranted pure and sent by mail. Send your address on a postal for my 21st annual circular and price list.

28w3t **HENRY ALLEY,** Wenham, Mass.

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For the past few years I have made this excellent food my leading article. Having the best established reputation in this city as a dealer in PURE HONEY direct from the Apiaries, enables me to obtain the highest market prices. Your consignments and correspondence respectfully solicited.

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Successor to Conner, Burnett & Co.,
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100 Colonies

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TESTED AND DOLLAR QUEENS

AND

BEES BY THE POUND.

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20 Years Experience in Queen Rearing.

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—"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified. One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Comb foundation on Dunham machine, 25 lbs. or over, 35c. per lb.; on Root machine, thin, for boxes, 40c. per lb. Safe arrival guaranteed.

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27w4t Coeyman's Hollow, N. Y.

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Appreciative Notices.

Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm. Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

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Dealers in bee supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

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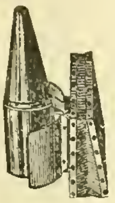

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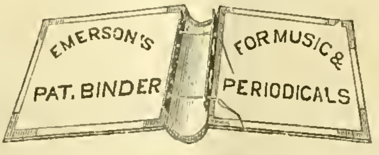

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Read the following opinions of the Book;

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Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYNKOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—A. E. WENZEL.

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It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Bulletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

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This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

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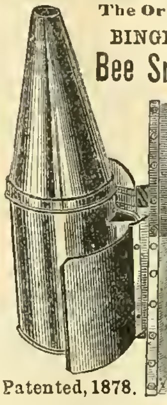
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If you buy the Original Patent Bingham Bee Smoker, you will aid the inventor of improved bee smokers—get the best, that never go out—always please—never is complained of—the standard of excellence the world over—better and handsomer this season than ever before. Price per mail, postpaid, from 65 cts. to $2. Our patents cover all the smokers that will burn sound stove-wood, or do not go out. If you buy our smokers and honey knives first, you will have to buy no others.

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I make a specialty of rearing pure Holy Land Queens, and have now more than 100 colonies in their purity. All Queens bred from D. A. Jones' Imported Queens. Dollar Queens, before June 20, $1.25 each; after that date, single Queen, $1.00; 6 for $5.00; 12 or more, 75 cents each; Warranted Queens, 25 cents more each. Tested Queens, $2.50 each; Italian Queens, same price.

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FULL COLONIES of ITALIAN BEES,

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QUEENS and NUCLEI IN SEASON.

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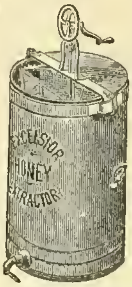

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.................................... 481
Death of Edward Townley.................... 481
Beeswax and Pollen.............................. 481
Sweet Clover... 481
"Silver Linings" Again.......................... 482
Italianizing an Apiary........................... 482

Among Our Exchanges—

Apiculture in Germany......................... 483
Healthfulness of Honey........................ 483
Pollen and Dysentery........................... 483
Bee-Keeping in Egypt........................... 483
The Labor a Bee Performs................... 483
Attractive Packages.............................. 483
The Transportation of Bees to India...... 484
Bee Notes for August........................... 484
Bee and Honey Show in England.......... 484

Correspondence—

Apis Mellifica—Its Poison.................... 485
Cheap Queens, Light Bees, etc............ 485
A Lesson from the Bees....................... 486
Sundry Items from New York............... 487
Bee-Keeping in Massachusetts............. 487
The Bee-Pastures of California............ 488

Convention Notes—

Local Convention Directory................. 489
Convention Notices.............................. 489

Selections from Our Letter Box—

Will it Pay?.. 490
My Season's Work this far................... 490
Drones as Comb Builders.................... 490
Disposition of Bees.............................. 490
Transferring... 490
Entomological...................................... 490
Poor Honey Season.............................. 490
Hanging Broad Frames........................ 491
Bee Stings for Deafness....................... 491
A Large Yield in Maine......................... 491
Worst Season Ever Known................... 491
More Motherwort.................................. 491
No Honey Yet....................................... 491
Not Discouraged.................................. 491
Colored Bee-Keepers........................... 491
This Year is "Badder"........................... 491
Hay for Shading.................................... 491
Prospect Yet Good............................... 491

Death of Edward Townley.

Mr. J. W. Winder, Thibodeaux, La., writes us that much rain prevails in Louisiana, and the honey crop is short in his section. He also sends us a clipping from the Cincinnati *Times-Star*, announcing the death of Edward Townley, who was the author of a book on the management of bees, and was enthusiastic in his devices for the production of honey:

Another old citizen of Cincinnati has just departed this life, and this time it is the venerable Edward Townley, who died at his residence on Mt. Auburn at 5:30 last evening. Mr. Townley was born in Elizabeth, New Jersey, in 1802, making him at the time of his decease 80 years of age. He came to this city in 1848, and established a good business as a carpenter and builder. He began the cultivation of bees and the manufacture of honey and built up probably the largest trade in this industry to be found in the State. Mr. Townley has lived a quiet life at his cosy place on Mt. Auburn for many years, performing his duties as a neighbor and friend with conscientious fidelity. His death removes a citizen for whom all entertained respect. He leaves four children, John, Edward, Eugene and Kate. The sons are all well known and successful business men of this city, Mr. Ed. Townley being Secretary of the Eureka Insurance Company, and Mr. John Townley President of the Commercial Insurance Company.

◆

☞ Dr. J. W. Norris has issued a call for a State Convention of bee-keepers, to be held in Oregon City, Ore., on Wednesday and Thursday, Oct. 25 and 26, 1882, at which the attendance of all interested in bee-keeping is invited.

Beeswax and Pollen.

Mr. Henry Hibbard, Pecatonica, Ill., writes as follows:

I send a sample of wax, and wish you to state through the next BEE JOURNAL, or by letter, what is the cause of its being in this shape. I sent 45 pounds to be made into foundation; 13 pounds was my own wax, tried out with wax extractor, and 32 pounds I bought of a man that I have every reason to believe perfectly straight and reliable. He said that it was made up in a clean kettle and dipped off of water. It was a good quality of wax—dark-yellow and tough, and pronounced nice wax by a number of bee-keepers. I sent it off to be manufactured into foundation, and received in return, 20 pounds of foundation, and the balance such stuff as I send you in a box. I am puzzled to know why the wax did not work up into foundation the same as that received with from one to two pounds shrinkage, as it has done before.

The sample sent us is pollen, and was the settling or sediment at the bottom of the cakes. It is not uncommon to see nearly ¼ of a cake with this sediment, especially where it is skimmed wax. With the wax extractor this sediment scarcely prevails, and the wax is worth 3 to 5 cents more per pound, unless the bottoms of the cakes of skimmed wax are liberally scraped. Of course, we cannot know to what extent this pollen prevailed in your shipment to the manufacturer; but we have seen many combs which contained less wax than pollen.

◆

Sweet Clover.—Good reports are beginning to come in regarding sweet clover. H. W. Garrett, Coeyman's Hollow, N. Y., in a private letter of July 26, says: "Sweet clover is now in full bloom, and my bees are harvesting with a rush." We expect to hear many good words for it before the season is through.

"Silver Linings" Again.

C. H. Dibbern, Milan, Ill., writes under date of July 26:

> I see there is a disposition on the part of some to make sport of your "silver linings." Well, we have seen the "linings" here for 2 or 3 weeks. I have new swarms that have gathered 50 to 60 lbs. of as nice section honey as I ever saw. Weather is very favorable, and bees doing better than for some years.

Prospects, so far as floral indications pointed in nearly all sections of our country, were never better than this season. The great majority of our correspondence reports white clover abundant, and bloom unprecedented; linden very liberal in bloom; fruit bloom was plentiful; locusts, etc., above the average; but the atmospheric influences in many sections have been unpropitious. In some districts, when the weather was dry so bees could be in the fields, heavy winds prevailed from the northern points of the compass, so that nectar failed to reach the surface of the flowers.

Many peculiarities have been reported this season, chief among which were strong colonies and bees in good condition; but no honey—some reporting hives full of bees, and they almost starving. Where the weather has been favorable, the honey crop has been tremendous, some bee-keepers having already realized a good harvest, and the "bees are still booming." One bee-keeper stated he had already realized 100 lbs. ot extracted honey per colony, spring count, and the "harvest but commenced." We saw last week second swarms with the second and third stories filled with brood and honey, awaiting the extractor, while the bee-keeper in charge remarked that it was probably true "bees will not swarm if given plenty of room," but he "found it impossible to give them plenty of room," at the same time pointing to a mammoth colony which had thrown off three swarms, and were again clustered outside, their three-story hive being filled to repletion. Swarming which usually prevails in June and the first week in July, has this season been delayed till the last week in July. In this section of Illinois linden is now in its prime, and where it is accessible, bees are deserting white clover to work on the linden, although the clover is still abundant. Should fall flowers be as abundant as we anticipate, the "silver lining" with many will be changed to a golden hue, while we still think many who are waiting and longing, will be "disappointed with happiness." Of course, nature may be lavish with her floral decorations, but if the elements be not favorable, the "sweetness will be wasted on the desert air," or driven back to mother earth.

◆

Italianizing an Apiary.

Many bee-keepers will probably wish to put their apiaries in order this fall to Italianize them next season, and for this class the following hints from Mr. W. T. Clary, Clarysville, Ky., may have especial interest:

> I have quite recently purchased an imported queen, for the purpose of requeening my apiary. I have 28 colonies of Italians more or less pure, and propose giving each doubtful colony a queen bred from my imported one, and letting them mate as they will, and requeen again next spring early, letting these young queens of this season's production produce the drones, and furnish the the queen again from my imported one. 1. Can I succeed by this means in having all my colonies pure? 2. Will the drones bred from these young queens (allowing more or less of them to have mismated) be as pure as if bred from an imported queen of known purity; or should I admit of drones being bred only from those queens whose progeny show the mother to have been purely mated. This is a question that I can hardly decide on, but what the mating of the queen has more or less bearing on the drone progeny. Should there be any doubts on this question, I would rather purchase two imported tested queens, and rear all my drones from one queen and queen cells from the other. Please give me your views on this question. 3. Would it not be the better way for me to form a nucleus for each colony where I desire to replace the queen, and have a laying queen bred in this nucleus to give the old colony before removing their old queen, or would you advise removing the old queen and giving the colony a ripe cell? I intend to start my cells as you advise, by removing all the brood from a strong colony, and I shall, after cells are ready for insertion in nuclei, divide the brood from the colony removed into nuclei.

1 and 2. The gist of the "Dzierzon Theory" is to the effect that the drone progeny of a pure queen will be equally pure, regardless of the mating; but the worker progeny will be hybrid if the mother be mismated; and hence the queen progeny of an impurely mated queen will be hybrids, as also the drones of the latter. The question has frequently been raised by very respectable authorities, that the mating of a queen of one kind of bees with a drone of another, will to some extent change the nature of the drone progeny. Our experimental observations have been very unsatisfactory.

3. Yes, decidedly better; for then you have but a short interregnum between one queen and the other. The interruption in reinforcing the colony will amount to only the necessary time to introduce your new queen. If a ripe cell be given, it will require an average of 10 to 12 days to bring forth the queen, mate her, and for prolific laying, while if a queen be nursed in a nucleus, it will require but 48 hours to safely introduce her—perhaps less time—and time is valuable.

Persons intending to rear queens next season with which to Italianize their apiaries, should procure the queen-mother at once, so as not only to test her bees this fall, but to rear at least one batch of queens, in order to test her queen progeny, even though they mate impurely. Bees are much like everything else, each one having some peculiar trait more prominent than others. Some queens excel as queen-breeders; some may produce superior drones, and others may be indifferent in everything. The latter class are not wanted, as it would be folly to consume time in changing stock without some compensating gain, which cannot be found in color alone. Besides, by rearing even a single batch of queens the previous season, it is possible one or more may be properly mated, thereby giving Italian brood with which to strengthen the old queen for drone-breeding in early spring. If the intention be to buy the queens with which to re-stock, then by all means buy this summer, when they can probably be bought cheaper, and if wintered in the colonies there will be no hybrid drones to embarrass you the following season.

A mistake is often made in buying the first queen, many supposing a young queen the most desirable kind with which to re-stock the apiary. We would advise the purchase of a vigorous, prolific, last year's queen, whose queen progeny, if possible, had been tested, and that produced docile, vigorous workers. A well matured mother breeds better queens and is more productive of early desirable drones. Do not expect to buy a good queen-mother early enough in the spring to Italianize your apiary, for fall will overtake you with the work but half accomplished; and *do not* *confide too much in theories*, no matter by whom sanctioned nor how long venerated.

Order a *good* queen-mother from a reliable breeder, telling him what you want and for what, and do not higgle over the price. If he is an honorable man, you will not regret it.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Apiculture in Germany.—Mr. F. A. Hanneman, in the *Bienenzeitung* thus contrasts bee culture in America and Germany.

> Every man is a pupil in the school of life. Science and his hard earned experiences are his teachers. But it sounds curious, to talk about a German and American school in apiculture—to mark sharp lines, as Mr. Dadant has done in an article published in the *Bienenzeitung*. Has Mr. Dadant forgotten that movable frames, and comb foundation were not invented in America, but have only been more successful there than in Germany, and that the inventors are Dr. Dzierzon, Baron Von Berlepsch, and Mr. Mehring? He should have said, Germany has the merit, and America has the profit. It is entirely owing to the climate, that Germany is not reaping the fruits of her science. American bee-keepers use frames longer than they are deep, but we do not consider this an improvement, it is merely a system of management peculiarly adapted to that country and climate.

◆

Healthfulness of Honey.—An exchange remarks as follows:

> American people are lovers of sweet and consume an average of 40 pounds or more of sugar for every man, woman and child of our population. To meet this demand, millions of dollars' worth of sugar are imported annually, and millions of dollars' worth of honey are allowed to go to waste from want of bees to collect and put in proper shape for the use of man. It is not as generally known as it should be that honey may be employed for sweetening purposes instead of sugar, for most of the purposes for which the latter is used. But could we supply it to the extent of diminishing our imports of sugar to one-half their present proportions, millions of dollars would be saved for the purposes of business in our own country. But far above all money considerations would be the use of a pure sweet upon the health of the people instead of the vile compounds now sold as sugars and syrups. The healthfulness of honey as food has been admitted from the earliest writers down through the centuries to the present time. Hence we have nothing to fear from the free use of honey, while recent developments show we have much to fear as to health in the use of adulterated sugars and syrups. But the price of honey in the past has had much to do in keeping it from the tables of men of limited means, who did not possess the workers to collect and store it for them. Honey is a vegetable production, appearing in greater or less quantities in every flower that nods to the breeze or kisses the bright sunlight in all this heaven-favored land of ours. It is secreted in the flower for the purpose of attracting insects, thus securing the complete fertilization of the female blossoms. Hence it follows that all the honey we can secure in the hour of its presence in the nectaries of the flowers, is clear gain from the domain of nature.

◆

Pollen and Dysentery.—Mr. A. Pettigrew in the London *Horticultural Journal*, says:

> That adult bees live on honey and do not eat pollen at all I steadfastly believed for more than forty years. Two or three years ago Mr. Raitt stated in a private letter to me that a highland lady fed her bees on barley bannocks, that he had found the husks of pollen grains in the excrements of his bees, and that such excrements changed their color if the bees were fed on peameal. This statement was quoted into the pages of this Journal. This evidence appeared satisfactory and conclusive, and I said so at the time, though I was convinced that bees can live and be healthy for months on honey or syrup alone—or, in other words, without pollen or meal of any kind. Other writers have said that pollen contains the nitrogenous element necessary to maintain the muscular strength of bees. Much has been written and spoken on this point without giving facts to support it. Not so with Mr. Raitt, who gave substantial evidence for his statements. Many hundred colonies of bees have died of hunger with plenty of pollen around them, while they have been sitting on cells of pollen; but whoever heard of bees dying of hunger with honey beside them?

◆

Bee-Keeping in Egypt.—The *American Cultivator* remarks thus, on the manner of keeping bees in Egypt:

> The Egyptians exhibit great skill in their manner of cultivating the bee. As the flowers and harvest are much earlier in Upper Egypt than in Lower, the inhabitants profit by the circumstance in regard to their bees. They collect the hives of different villages on large barges, and every proprietor attaches a particular mark to his hives. When the boat is loaded the conductors descend the river slowly, stopping at all places where they can find pasturage for the bees. After having thus spent three months on the Nile the hives are returned to the proprietors, and after deducting a small sum due to the boatman for having transported the hives from one end of the river to the other, he finds himself suddenly enriched with a quantity of honey and wax, which is immediately sent to market. This species of industry procures for the Egyptians an abundance of the production of the bee, which they export in considerable quantities to foreign lands. In the counties of Yorkshire and Lancashire, England, when the moors are covered with a species of heather called ling, and which blossoms in August, covering this barren heath with a beauty scarcely equaled in any other country, distant bee-keepers load their hives in wagons, and having previously engaged quarters for them with the farmers who dwell on the confines of the moor, the hives are conveyed to their ranges, where they remain a month or six weeks. Comparatively empty hives when carried away are brought back full of honey, and many weak colonies are thus enabled to winter over without loss, while the best ones have large quantities of honey and wax removed from them, the product of about two months in the year. The hum of the busy bees and the blooming of ling enliven a scene which, during the other ten months of the year appears but a dreary waste, at best but a pasture for the black faced heath sheep, or a breeding place for grouse, hares and foxes, and hunting ground for England's aristocracy. Of late years many of these moors have been enclosed, the lands cultivated, and are producing an abundance of potatoes, oats, barley and grass.

◆

The Labor a Bee Performs.—The following combinations of figures, from the *Michigan Farmer*, will give a faint idea of the ceaseless, patient and rapid work performed by the honey bees during the few short weeks when everything is favorable for a good honey harvest. Is it a matter of wonder, that the days of the worker are "dwindled to the shortest span?"

> It is estimated that 125 clover blossoms contain one gramme of sugar. As each blossom consists of 60 calyces, at least 125,000 by 60, or 7,500,000 calyces must be rifled to afford a kilogramme of sugar, and as honey contains 75 per cent. of sugar, it requires 5,600,000 calyces of clover to yield a kilogramme of the former; hence, we may imagine the countless number of flowers that bees must visit to be able to stock their hives with honey.

◆

Attractive Packages.—An exchange indorses our advice regarding neatness in preparing honey for market as follows:

> In marketing honey, this point should never be forgotten—that a good article in an attractive shape will always command the highest price, the best reputation and a steady demand.

The Transportation of Bees to India.—Mr. F. Cheshire, in the London *Journal of Horticulture*, gives the following results of his first shipment of bees to India:

> Questions connected with the different races of bees, their specific variation in structure, temper, size, industry, and power of endurance, are receiving unwonted attention; and as a result plans of packing which have enabled colonies to endure prolonged confinement under circumstances of peculiar trial are more than commonly interesting.
>
> During 1878 and 1879 I sent two colonies and two nuclei *via.* the Red Sea to Bombay; the bees after their unshipment had a further journey into the interior, entailing an incarceration of nearly forty days before they reached their then owner, an Indian gentleman of distinction. The nuclei carried each four of my half Woodbury frames, as used by me formerly for queen-rearing. These were well stored with sugar, while the backs of the boxes contained pouches cut off from the bees by perforated zinc, and into these pouches sponges filled with water were occasionally put during the voyage. Perforated zinc covered the frames above, while the boxes were made 2 inches deeper than accommodation of the frames required. No other precautions were taken except that the combs were well fixed and the frames secured against lateral sway. Both nuclei arrived in capital condition.
>
> The two colonies, one black and one Ligurian, each contained eleven frames of Woodbury size, three of which had sealed brood to supply young bees to replace the gaps made in the ranks of the adults. The hives had each a half story beneath and a half story above, the lower half story having its sides of perforated zinc while the same material went over the top. The bees were thus able to cluster under or over their frames as they might desire, while the dead would simply fall clear away from the combs and so no longer incommode the living. The device of pouches and sponges was added as with the nuclei. The blacks arrived with stores nearly exhausted but in perfect condition. The Ligurians were starved "dead to a man," as my esteemed correspondent expressed it. With the one exception, the cause of which is clear, the bees survived their long journey and endured the baking heat of the Red Sea in the hot season. No combs collapsed and the mortality was not destructively great. The success, however, ended here, as the accompanying quotation from one of the owner's letters, in which he refers to the nuclei only, will show.
>
> "You will be sorry to hear that I saw the last of my bees about ten days ago. Both the Ligurians and the blacks at first went on all right, the latter having bred and brought forth a good progeny last August, and the former having built new combs to a considerable extent, when about December I felt that both hives began dwindling away in numbers. Previous to that I had noticed that they had two very powerful enemies in the common garden lizard and the rats. I destroyed nearly every one of the former in my neighborhood, and took measures to prevent the latter getting to the hives; but I could not find out the cause of the gradual disappearance of the bees. In December, January, and February, by constant feeding, I induced the bees to stay in, and then there was no diminution; but they could not be kept in longer when the sun got hot, and very few returned. The last to disappear were the two queens, and I never saw a dead bee on the floor-board. I am afraid swallows and such small birds must have preyed on them. I am going to domesticate some of our native bees in my empty hives."

It is regretable that this attempt at acclimatization failed, but the fact of the safe transit of the bees through considerable difficulties is in itself at least interesting.

◆

Bee Notes for August.—The *American Agriculturist* gives the following as its "Bee Notes for August:"

> In many parts of the country there is a great dearth of nectar-bearing flowers this month—only enough to keep the bees at breeding. If the bees secure no honey, they should be fed sparingly, a very little each day, so that the queen may not stop laying. In this way the brood rearing can be kept up, and there will be abundant bees to secure a rich store of autumn honey, and insure safe wintering. If the queen once stops laying, it is often very difficult to start her again. Some bee-keepers say that feeding does no good, as upon trial the queen still refuses to lay. In all such cases the feeding was commenced too late. We have tried experiments in this direction for many years, feeding part of our colonies, and omitting to feed others, and have always found the importance of feeding abundantly demonstrated.
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> Whenever the bees are not gathering honey, their industrious instincts lead them to become free-booters, and, robbing once commenced, woe to the weak colonies of the apiary. Nuclei are also very likely to fall a prey to these pillagers. Nothing more quickly induces robbing than the spilling or leaving of any honey or syrup about the apiary. Let the bees once get a taste, and they become ravenous, and are at once on the rampage to appropriate the property of others. Such a spirit of plunder may also be engendered by too frequently opening the hives during these times of enforced idleness. The colony robbed should have the entrance nearly closed, so that only one bee can pass out at a time. Then almost any colony will defend itself, unless it has become entirely dispirited, when it must be closed up entirely, or carried into a cool room for a time. If closed, give sufficient ventilation, that the bees may not smother.
>
> Strong colonies are those that bring profit, and such will defend themselves against robbers at all times. The Italian bees are far less liable to suffer from robbers than are the blacks, while the Syrians are rarely thus troubled. Robbers that attack a Syrian colony find they have "caught a Tartar."

Notes.—The Syrian bees are more than sustaining their reputation. They have all of the points of superiority possessed by the Italians, magnified, except that of amiability, and as they are handled, they are becoming very manageable. This year our queenless colonies are very peacable, while last year they were exceedingly irritable. Their late and early breeding are points in their favor. For prolificness, they are marvels. They are superior in the points where Italians fail; they are slow to leave the hives on very windy days, a trait which natural selection would develop in the windy regions of Syria, and they are ready to go into the sections to store their honey.

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Bee and Honey Show in England.—The following is an account of the bee and honey show at the Royal Agricultural Fair in London, during the second week in July:

> The British Bee-Keepers' Association, under the auspices of the Royal Agricultural Society, have arranged an excellent display of bees, hives, and appliances used in the more advanced methods of bee-keeping. These annual apiarian exhibitions have formed part of the Royal Agricultural Society's programme since the Kilburn Show held in 1879, and have increased in popularity in each succeeding year. The present Exhibition of bee-keeping appliances at Reading far surpasses any of its predecessors. The present unsettled state of the weather has, however, greatly militated against the production of honey, and in consequence many of the entries in the honey classes did not appear at the Show.
>
> Observatory hives stocked with bees and their queen are a great feature in the show. The first, second, and third prizes in this class were all awarded to Mr. T. B. Blow, of Welwyn, Herts. Mr. Blow also gained first prizes for the best collection of appliances adapted for modern bee-keeping and for comb foundation, the latter being prepared by a machine in the presence of the Judges. Messrs. Neighbour & Son, of Regent street, and Messrs. Abbott Brothers, of Southall, have also an excellent display of goods in the several classes, the former taking second and the latter third prizes in the class for the best exhibition of hives and other appliances.

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☞ Mr. Jos. Wood, Ananosa, Iowa, writes: "My bees are booming; I cannot keep up with them for the past week."

CORRESPONDENCE

For the American Bee Journal.

Apis Mellifica—Its Poison.

JAMES HEDDON.

FRIEND NEWMAN.—The following article I wrote for the *Homœopathic Physician*, a monthly Journal of Medical Science published in Philadelphia, Pa. I am trying a remedy that has been kindly presented to me by the Homœopathic Society, and will be able to report its results later :

At the request of Dr. Ballard, of Chicago, I herewith give a brief account of my peculiar experience with the poison from the honey bee. I have been a specialist in apiculture, for the past 14 years, and have learned something considerable about the business; have consequently neglected learning other things, among which anatomy and materia medica are conspicuous. You will, consequently, please accept my plain statements given in the parlance of an unprofessional.

I am 37 years old, nervous-sanguine temperament (in the extreme), weigh 135 lbs., and have good health, but excessive general nervous irritation, mostly in the form of mild chronic neuralgia. My voice has always indicated rather weak bronchial organs; never had a cough, however, before I experienced bee-poisoning. I began bee-keeping on a somewhat extensive scale, in the year 1878. As stated before, it has been my sole occupation ever since. I have had as many as 550 colonies, in 3 apiaries, at one time.

Seven years ago, I began to notice an itching sensation in the ears. This would come on at times, and after about two years, it extended to the glands inside the mouth, and near the root of the tongue. After about one more year, the sensation began to be very severe in the roof of the mouth, just around and in front of the palate. It was at this time that I first discovered that the affection had a connection with the bees. To sweep the floor of one of my rooms, where bees had fallen and been trodden upon, was sure to bring on this sensation at once. Next, I found, that to open a hive and breathe the odor of the bees (especially if not thoroughly subdued) would also cause the trouble. But, business must be attended to, and I persisted in working among the bees and bee hives, till the itching and tingling sensation crept down the bronchial tubes all around about the lungs. One night after a day's work among the bees, I woke up about midnight with the asthma.

A celebrated travelling doctor, examined me "free," and gave me some medicine for $10.00, and told me I had a case of "bronchial" asthma, that looked wicked. He looked at my throat (shortly after a bee had) and "must have something done for it at once." I was not sure then that bee-poison was the cause.

Finally, I began making tests; leaving the whole business for two weeks, I was almost entirely clear of all, except the first symptoms in the ears, which only troubled me occasionally.

The first breath of bee-poison I inhaled, on my return, was followed by all the former symptoms, seemingly in an increased degree, and in ten minutes my throat turned red, and clearly showed severe irritation. I resolved to hire more help, add to the business of honey production that of manufacturing and selling bee-keepers' supplies, and in that way absent myself from contact with the virus to a greater extent, and yet keep busy.

I have done so, and am in consequence quite free from the trouble most of the time. But if I at any time come in contact with the poison, my symptoms seem to be as radical as ever, yes, even more so. I will cite one instance. All apiarists know that often when a maddened threatening bee flits around one's head she generally discharges into the air her poison. It is recognized by the nasal organs only. Now, I have found that this occurs when none of the five senses of the healthy bee-master recognizes it.

One day last autumn, after I had kept from all contact with the poison for some weeks, and had no troublesome symptoms, I stepped into my yard, when an ugly bee passed within about 8 inches of my face, discharging poison as she passed. About one half-hour after I was seized with perhaps the most severe paroxysm of my experience. First, symptoms were an almost unbearable itching, tingling sensation, of the roof of the mouth, and so on down the breathing tubes as far as they extend; then an asthmatic filling-up sensation. For more than 8 hours I could not speak aloud. For two or three days I could not raise my voice above common conversation. All passed off, leaving me as well as ever, by keeping away from the poison. In correspondence with one Italian and one German, of large apicultural experience in the old countries, I learn that such cases are known there.

When we bear in mind the fact that the older system of honey production, as practiced in the old world, and in this country till recently, did not bring the operator into any such near or constant contact with the bees, and that cases where individuals in this country, working upon the improved system, for any such length of time as 14 years as a specialty, are very rare, we have reason to look for the development of many more such cases as my own.

Dr. Ballard expresses the desire to doctor my case upon the homœopathic system; to which I assent, knowing, as I think I do, that the homœopathic treatment possesses that splendid feature over all other schools, that if it dont't cure it don't kill. I will here say publicly, what I said by letter to him, that "faith" will play no part in any possible cure of my case.

I know that the laws of hygiene point strongly to the claimed base principle of Homœopathy, but I have always failed to get any effect from homœopathic remedies, given by professed thoroughbreds. I can at most consider the science as one only vaguely understood at best. Still its successful operations force all the other schools to step down on a level with it, to say the least, in all observing and thinking minds.

Any questions bearing upon the case, will be answered promptly and with pleasure, for I think I may safely say in the name of our fraternity, that a specific remedy for these symptoms, coming from any school, will put us under many obligations to that school.

For the American Bee Journal.

Cheap Queens, Light Bees, etc.

AARON BENEDICT.

Several years ago I stuck three stakes to steer to, and as I keep my eyes constantly on them, following up, I find them precisely in range. The lighter-colored and larger the bee, the more docility. I have already proven to my satisfaction that the smaller and blacker the bees, the more vindictive they are. I do not advertise queens for sale in any paper at present, and shall keep right on improving my bees until I get a fixed type—bees that will breed true to the feather. I am conceited enough to believe that when I get a bee to suit me, it will suit most anybody, for I am hard to please with anything like a hybrid or black bee.

There has been considerable said about the cheap queens of late. Nearly all that advertise such queens do not guarantee their purity. They can send out all the impure queens they rear, such as a careful breeder would behead on sight; some guarantee these queens reared from imported mothers only. My experience is to take an average of five imported queens, and it would take a careful breeder five or six years of careful breeding to produce as good as we already have. I put the dollar queen-breeder, and the advocates of dark, leather-colored Italians in about the same class. One sends out all the queens he rears, whether pure or impure, scattering broadcast all grades of bees, and probably not a thoroughbred queen in the whole lot; the other sends out dark, leather-colored queens, and if they produce dark bees, the purchaser gets just what he bargained for. There is another class of breeders who make it their steady aim to breed bees as bright-colored as they can, and they have succeeded in producing what appears to be a distinct variety of bees. Such breeders cannot afford to sell queens for a dollar each. I believe the time will come when such queens will bring a price somewhere near what it costs to rear them.

I do not find fault with dollar queens,

for they are worth that to any man who wishes to multiply colonies, if he can get such queens as he wants. To multiply colonies rapidly, a laying queen should be kept in the old as well as in the new colony. The old queen leaves with the first swarm, and the parent colony is queenless, and as a rule, it will be 18 to 21 days before the young queen commences to lay. By giving this colony a laying queen at once, at the end of 21 days there will be as many eggs, larvæ, and brood as there was when the old queen went away. This is my plan of multiplying colonies.

Bees always commence with larvæ 3 or 4 days old to rear queens, if they have them, and never with eggs or larvæ just hatched, unless compelled to. Larvæ just hatched is fed with a white milky substance, the same as the worker larvæ always receives—royal jelly is too strong. I once put an empty frame of comb in the center of the hive where I had my breeding queen; 24 hours after I took it out, and found the cells supplied with eggs. I cut this comb in small strips, and gave these to queenless bees. The bees commenced enlarging the cells, putting in royal jelly before the eggs hatched. Over 20 queens were reared from these strips, and they were the most unsightly batch of queens I had ever seen. They were all colors, and some not larger than a worker bee. I have since noticed the same small inferior queens. Where I had removed a queen as soon as she commenced to lay, the bees commenced too soon with jelly on the eggs or larvæ. Some think the cause of those small queens was that the bees commenced on larvæ too far advanced as workers; I never knew bees to commit that blunder. Bees are wiser with their instinct than men with their reason.

Bennington, O.

Southern World.

A Lesson from the Bees.

T. S. ARTHUR.

A murmur of impatience came from the lips of young Wentworth as laying aside his palette and brushes, he took up his hat and with a worried manner, left the studio, where, with two or three young men, he was taking lessons and seeking to acquire skill in the art of painting. He was at work on the head of one of Raphael's Madonnas, and was, with the warm enthusiasm of a young artist in love with the beautiful, seeking to transfer to his canvas the heavenly tenderness of her eyes, when a coarse jest from the lips of a fellow student, jarred harshly on his ears. It was this that had so disturbed him. Out in the open air the young man passed, but the bustle and confusion of the street did not in the least calm his excited state of feeling.

"A coarse, vulgar fellow!" he said angrily, giving voice to his indignation against the student. "If he is to remain in the studio, I must leave it. I can't breathe the same atmosphere with one like him."

And he walked on aimless, but with rapid steps. Soon he was opposite the window of a print seller. A gem of art caught his eye.

"Exquisite!" he exclaimed, as he paused and stood before the picture. "Exquisite! What grouping. What an atmosphere. What perspective!"

"Ha, ha!" laughed a rough fellow at his side, whose attention had been arrested by a comic print. "Ha, ha, ha!" And clasping his hands against his sides, he made the air ring with a coarse but merry peal. He understood his artist fully, and enjoyed this creation of his pencil.

"Brute!" came almost audibly from the lips of Wentworth, as all the beautiful images just conjured up faded from his mind. And off he started from the print window in a fever of indignation against the vulgar fellow who had no more manners than to guffaw in the street at sight of low life in a picture. On he moved for the distance of one or two blocks, when he paused before another window full of engravings and paintings. A gem of a landscape, cabinet size, had just been placed in the window, and our young friend was soon enjoying its fine points.

"Who can be the artist?" he had just said to himself, and was bending closer to examine the delicate treatment of a bit of water, over which a tree projected, when a puff of tobacco smoke stole past his cheek, and found its way to his nostrils. Now Wentworth was very fond of a good cigar, and the fragrance that came to his sense on this particular occasion was delicate enough of its kind. In itself it would have been agreeable rather than offensive; but the vulgarity of street-smoking he detested, and the fact of this vulgarity came now to throw his mind again from its even balance.

"Whew!" he ejaculated, backing away from the window, and leaving his place to one less sensitive, or capable of a deeper abstraction of thought when anything of true interest was presented.

"I will ride out in the country," said he. "There, with nature around me, I can find enjoyment." So he entered an omnibus, the route of which extended beyond the city bounds. Alas! here he also found something to disturb him. There was a woman with a lapdog in her arms, and another with a poor sick child, that cried incessantly. A man partially intoxicated, entered after he had ridden a block or two, and crowded down by his side. Beyond this, the sensitive Wentworth could endure nothing. So he pulled the check string, paid his fare and resumed his place on the pavement, muttering to himself as he did so: "I'd a thousand times rather walk than ride in such company."

Two miles from the city resided a gentleman of taste and education, who had manifested no little interest in our excitable young friend. To visit him was the purpose of Wentworth when he entered the stage, which would have taken him within a half a mile of his pleasant dwelling. He proposed to walk the whole distance rather than ride with such disagreeable companions. The day was rather warm. Our young artist found it pleasant enough while the pavement lay in the shadow of contiguous houses. But, fairly beyond these, the direct rays of the sun fell on his head, and the clouds of dust from the passing vehicles almost suffocated him. Just a little in advance of him, for a greater part of the distance, kept the omnibus, from which the woman with the lapdog and crying child got out only a square beyond the point where he left the coach. The drunken man also soon left the vehicle. Tired and overheated, Wentworth now hurried forward, making signs to the driver; but, as the driver did not look around, his signs were all made in vain; and he was the more fretted at this for the fact that the passenger who was riding in the omnibus, had his face turned towards him all the time, and was, so our pedestrian imagined, enjoying his disappointment.

Hot, dusty, and weary was our young artist, when, after walking the whole distance, he arrived at the pleasant residence of the gentleman we have mentioned.

"Ah, my young friend! How are you to-day! A visit, I need not tell you, is always agreeable. But you look heated and tired. You have walked too fast."

"Too far, rather," said Wentworth. "I have come all the way on foot."

"How so? Did you prefer walking?"

"Yes; to riding in the stage with a crying child, a lapdog and a drunken man."

"The drunken man was bad company, certainly. But the crying child and the lapdog were trifling matters."

"Not to me," answered Wentworth. "I despise a woman who nurses a lapdog. The very sight frets me beyond endurance."

"Still, my young friend, if women will nurse lapdogs, you can't help it; and so, your wisest course would be to let the fact pass unobserved; or at least uncared for. To punish yourself, as you have done to-day, because other people don't conform in all things just to your ideas of propriety is, pardon me, hardly the act of a wise man."

"I can't help it. I am too finely strung, I suppose—too alive to the harmonies of nature, and too quick to feel the jar of discord. Do you know to what you are indebted for this visit to-day?"

And Wentworth related, with a coloring of his own, the incidents just sketched for the reader; taking, as he did so, something of merit to himself for his course of action.

"Upon what were you at work?" asked his friend, when the young man finished speaking.

"On the beautiful Madonna, about which I told you at my last visit."

"It is nearly completed?"

"A few more touches, and I would have achieved a triumph above anything yet accomplished by pencil. It was in the eyes that I failed to succeed. They are full of divine tenderness, that only a magic touch can give. Raphael was inspired when he caught that look from heaven. I had risen, by intense attraction of mind, into the perception of the true ideal I sought to gain, and the power to fix it all on canvas was flowing down into my hand, when the jar of discord produced by that vulgar fellow scattered everything into confusion and darkness."

"And so the Madonna remains unfinished?"

"Yes, and I am driven from work. Here is another day added to my list of almost useless days."

The friend mused for a little while, and then said, somewhat sententiously—

"You must take a lesson from the bees, Henry."

"I will hear a lesson from your lips, but, as for the bees."

And he shrugged his shoulders with an air that said—"I can learn but little from them."

"Let us walk into the garden," said the friend rising.

And they went out among the leafy shrubs and blossoming plants, where butterflies fold their lazy wings, and the busy bees made all the air musical with their tiny hum.

"Now for the lesson," said the young artist smiling. "A lesson from the bees. Here is a sprightly little fellow, just diving into the red cup of a honeysuckle. What lesson does he teach?"

"One that all of us may lay to heart. There is honey in the cup, and it is his business to gather honey. Just beside the crimson blossom, and even touching it, hangs an ugly worm, spinning out the thread of his winding-sheet; but the bee does not pass the flower, because of its offensive presence, nor will he hasten from it until he has extracted the honey-dew. Now his work is accomplished; and now he has passed to the clover blossom, which his weight bends over against the deadly night-shade. But the poisoned weed is no annoyance to him. So intensely pursues he his search for honey, that he is unconscious of its presence. Now he buries himself in the blushing rose leaves, 'heeding not and caring not,' though a hundred sharp thorns bristle on the stem that supports the lovely flower. And now, full ladened with the sweet treasure he sought, he is off on swift wing for the hive. Shall we observe the motion of another bee? Or is the lesson clear?"

The countenance of Wentworth looked thoughtful, even serious. A little while he stood musing, as though his perceptions were not lucid. Then turning to his wise and gentle reproving friend, he grasped his hand, saying, with a manner greatly subdued:

"The lesson is clear. I will go back and finish my Madonna, though a dozen vulgar fellows haunt the studio. I will have no eyes or ears for them. My own high purpose to excel, shall make me blind and deaf to anything that would hinder my onward progress. Thanks for the lesson of the bees. I will never forget it. Like them, I will gather the honey of life from every rich flower in my way. Let the weeds grow high if they will, I shall not regard their presence."

For the American Bee Journal.

Sundry Items from New York.

J. E. MOORE.

I have been reading the articles in the Weekly BEE JOURNAL on the "honey prospects," and as I see none from this part of the State, send a few items from Genesee county. The season, so far, has been peculiar, and although the apiarist has been hoping for better things all along, if the weather continues as it has been much longer white clover honey will be hard to find in this part of the State.

As the season was two weeks later than usual, and the fields gave promise of abundant clover bloom, I thought the weather would be more favorable than had it blossomed earlier, and so made preparations for a large yield; but, although the bloom has been most abundant, very little honey has been gathered. The rotation has been three days high winds then storms, followed by one or two days fair weather. We had rain on the night of the 17th, followed by warm showers on the morning of the 18th, up to 9 a. m. By 10 o'clock it seemed as though I never saw the bees bring in honey so fast, and I went out of the bee house several times, queen cage in hand, thinking the bees were swarming. This continued until noon of the 19th, when the wind commenced rising, and still continues, so that my expectations that the "boom" had come at last seem likely to be blasted.

These high winds are invariably cold. At 9:45 this morning the temperature in the sun was 88°, while in the shade it was only 67°. To sum up, the clover bloom has been most abundant, but the atmospheric conditions have been altogether against the secretion of honey by the flowers. I do not agree with Mons. Layens' theory, mentioned by Mr. Todd, as the cause of no honey in clover. The linden is not in bloom yet, and I notice the buds are not so abundant as last year.

When I boxed the hives, we had 67 colonies of Cyprians and 15 of Italians. Have had 15 Cyprian and 1 Italian swarm. I never worked among bees that handled easier than the Cyprians do in hiving swarms. On some accounts I like them better, and on some not as well as the Italians; but shall be better able to judge as to their merits at the close of the season. I think they hold their own better in the spring, and are more active than the Italians. Their sense of smell is wonderfully acute, so that if there is the least chance given they are very neighborly, and if one has combs filled with bee-bread and honey, set them in an empty hive and leave the cover off long enough to turn around three times, then cover up and they will take care of it. Why, I have had them cut combs down to the partition walls about ⅓ distance down from top bar. Hark! what's all this buzzing mean?....Well I have hived a second swarm of Cyprians. I have put back all second swarms, as I think their presence will be needed in the boxes; but this was such a nice large one I thought I would hive it, and as the queen was with them (all old queens are clipped) I shook them into the hiving bag.

When bees swarm from the hive where the queen is clipped, if you want the bees to return to the hive without clustering, cage the queen as soon as possible and put her in the hive; or, if you prefer clustering, tie the cage on a bush suspended on a pole, following the bees to a tree or bush.

Byron, N. Y., July 20, 1882.

For the American Bee Journal.

Bee-Keeping in Massachusetts.

F. C. BOWDITCH.

Of my thirteen colonies twelve began April in fair condition. The spring here, as everywhere else, was very backward. I commenced feeding on April 8, and by care I was able to get and keep my colonies strong during our cold and discouraging May. Consequently when fruit bloom began my bees literally fell upon it; and we had about two weeks good honey flow and the eleven colonies I ran for extracting, filled their two story hives and began on a third story. On the 2d of July I extracted from the second stories alone 300 lbs. of fine honey, leaving the first and third stories, so far as they contained any honey, untouched. On the same day, right in the midst of clover and linden bloom, the bees began to kill their drones, and I regard it as very fortunate I did not extract too closely, as they have barely held their own ever since and many combs are almost empty.

I think if I had had empty old combs to give them I should have secured a much larger crop, but they had to draw out foundation, which takes time, and a sheet of foundation just drawn out will not hold more than three-quarters as much honey as a tough old comb. Three hundred pounds does not in quantity really amount to anything, but then there are some not very far off who have none at all, so I feel encouraged.

None of my eleven colonies swarmed or had any nuclei made from them, so you will see I directed their whole energy to honey gathering. We have every reason to expect and look forward to a good yield from golden rod and asters, as the conditions for it appear just right; last year it failed entirely.

I have noticed in the JOURNAL several articles, the writers of which claim that the production of drones can be stopped or controlled by using worker foundation, and several answers *per contra*, that the use of foundation would not accomplish that result. I find I *cannot* prevent my bees from rearing some drones; they will take a worker comb and lengthen out the cells, or they will cut the worker cells down to the bases and build drone cells in their place, they *will* have some drones; undoubtedly the use of foundation prevents a very large number of drones, but that it will entirely prevent their being reared, I am not willing to admit.

I have one colony of bees that are very peculiar; they are the most vicious of hybrids, and last year I thought I would Italianize them. I made two attempts, and each time with great care, but they killed the queen both times, until it became so late in the autumn that I decided to wait till this season. Last May I tried again, and they killed the queen, and I, not to be outdone, tried another. I saw her go in at the entrance and the bees feed her and lick off the honey I had rolled her in, and I found the next day that no cells were started so I supposed, of course, all was right; but yesterday I found she had been killed as usual, and a small black queen reigned in her stead. I shall try again and again till I succeed. I have tried several methods such as letting the bees gnaw her out of the cage, shaking off the bees in a box and letting her run in with them, and other ways which I have used with success in other cases, but they seem to have made up their minds to have their own way. I think in the last case they actually accepted the queen at first and then killed her afterward; they are a curious lot.

Brookline, Mass., July 21, 1882.

From the Century for June, 1882.

The Bee-Pastures of California.

JOHN MUIR.

When California was wild, it was one sweet bee-garden throughout its entire length, north and south, and all the way across from the snowy Sierra to the Ocean.

Wherever a bee might fly within the bounds of this virgin wilderness—through the redwood forests, along the banks of the rivers, along the bluffs and headlands fronting the sea, over valley and plain, park and grove, and deep leafy glen, or far up the piney slopes of the mountains—throughout every belt and section of the climate, bee flowers bloomed in lavish abundance. Here they grew more or less apart in special sheets of no great size, there in broad, flowing folds hundreds of miles in length, zones of polleny forests, zones of flowery chaparral, stream-tangles of rubus and wild rose, sheets of golden compositæ, beds of violets, beds of mint, beds of bryanthus and clover, and so on, certain species blooming somewhere around all the year.

But of late years plow and sheep have made sad havoc in these glorious pastures, destroying tens of thousands of the flowery acres like fire, and banishing many species of the best honey plants to rocky cliffs and fence corners, while, on the other hand, culture thus far has given no adequate compensation, at least of kind—acres of alfalfa for miles of the richest wild pasture, ornamental roses and honeysuckles around cottage doors for cascades of wild roses in the dells, and small, square orchards and orange groves for mountain belts of chaparral.

Only ten years ago, the Great Central Plain of California, during the months of March, April and May, was one smooth, continuous bed of honey bloom, so marvelously rich that, in walking from one end of it to the other, a distance of more than 400 miles, your feet would press more than a hundred flowers at every step. Mints, gilias, memophilas, castilleias, and innumerable compositæ were so crowded together that, had ninety-nine in every hundred been taken away, the plain would still have seemed extravagantly flowery to any but Californians. The radiant, honey-full corollas, touching and over-lapping, and rising above one another, glowed in the living light like a sunset sky—one glorious blaze of purple and gold. Down through the midst flowed many a river, the Sacramento from the north, the San Joaquin from the south, with noble tributaries sweeping in at right angles from the mountains, dividing the plain into sections fringed with trees.

Along each river and tributary there is a strip of bottom-land, countersunk beneath the general level, and wider toward the foot-hills, where magnificent oaks, from three to eight feet in diameter, cast grateful masses of shade over the open, prairie-like level. And close along the water's edge there is a fine jungle of tropical luxuriance, composed of white rose and bramble bushes and a great variety of climbing vines, wreathing and interlacing the branches and trunks of willows and alders, and swinging across from summit to summit in heavy festoons. Here the wild bees revel in fresh bloom long after the flowers of the drier plain have withered and gone to seed. And in midsummer when the "blackberries" are ripe, the Indians come from the mountains to feast—men, women and babies in long noisy trains, oftentimes joined by the farmers of the neighborhood, who gather this wild fruit with commendable appreciation of its superior flavor, while their home orchards are full of ripe peaches, apricots, nectarines and figs, and their vineyards are laden with grapes. But, though these luxuriant bottoms are thus distinct from the smooth, treeless plain, they make no heavy dividing lines in general views. The whole appears as one continuous sheet of bloom, bounded only by the mountains.

My first view of this central garden, the most extensive and best defined of all the bee pastures of the State, was obtained from the summit of the Pacheco pass, about the middle of April, 1868, when it was rejoicing in all its glory. Along the eastern horizon rose the mighty Sierra, white and jagged with snowy peaks along the top, dark with forests in the middle region, and purple with grasses and flowers and chaparral at the base, and blending gracefully in smooth hill undulations into the glowing yellow plain, which, like a cloth of gold, was seen flowing away to north and south as far as the eye could reach; hazing and vanishing in the distance, distinct as a new map along the foot-hills at my feet—the sunny sky arching over all.

Descending the eastern slopes of the coast range, through beds of gilias and lupines, and around many a hillock and bush-crowned headland, I at length waded out into the midst of the glorious field of gold. All the ground was covered, not with grass and green leaves, but with radiant corollas, about ankle-deep next the foot hills, knee deep or more five or six miles out. Here opsis, corethrogyne, grindelia, etc., growing in close social congregations of various shades of yellow, blending finely with the purples of clarkia, orthocarpus, and œnothera, whose delicate petals were drinking the vital sunbeams without giving back any sparkling glow.

Because so long a period of extreme drought succeeds the rainy season, most of the vegetation is composed of annuals which spring up simultaneously and bloom together at about the same height above the ground, the general surface being but slightly ruffled by the taller phacelias, pentstemons, and groups of *Salvia carduacea*, the king of the mints.

Sauntering in any direction, hundreds of these happy sun-plants brushed against my feet at every step, and closed over them as if I were wading in liquid gold. The air was sweet with fragrance, the larks sung their blessed songs, rising on the wing as I advanced, then sinking out of sight in the polleny sod, while myriads of wild bees stirred the lower air with their monotonous hum—monotonous, yet forever fresh and sweet as every-day sunshine. Hares and spermophiles showed themselves in considerable numbers, and small bands of antelope were almost constantly in sight, gazing curiously from some slight elevation, and then bounding swiftly with unrivaled grace of motion. Yet I could discover no crushed flowers to mark their track, nor, indeed, any destructive action of any wild foot or tooth whatever.

The great yellow days circled by uncounted, while I drifted toward the north, observing the countless forms of life thronging about me—lying down almost anywhere on the approach of night. And what glorious botanical beds I had! Oftentimes on awakening I would find several new species leaning over me and looking me full in the face, so that my studies would begin before rising.

About the first of May I turned eastward, crossing the San Joaquin between the mouths of the Tuolumne and Merced, and by the time I had reached the Sierra foot-hills, most of the vegetation had gone to seed and become as dry as hay.

All the seasons of the great plain are warm or temperate, and bee-flowers are never wholly wanting; but the grand spring time—the annual resurrection—is governed by the rains, which usually set in about the middle of December or the beginning of January. Then the seeds, that for six months have lain on the ground dry and fresh as if they had been gathered into barns, at once unfold their treasured life. The general brown and purple of the ground, and the dead vegetation of the preceding year, give place to the green of mosses and liverworts and myriads of young leaves. Then one species after another comes into flower, gradually overspreading the green with yellow and purple, which lasts until May.

The "rainy season" is by no means a gloomy, foggy period of constant cloudiness and rain. Nowhere else in North America, perhaps in the world, are the months of December, January, February and March so full of bland, plant-budding sunshine. Referring to my notes of the winter and spring of 1878-9, every day of which I spent out-of-doors, on that section of the plain lying between the Tuolumne and Merced rivers, I find that the first rain of the season fell on the 18th of December. January had only six rainy days—that is, days on which rain fell; February three, March five, April three, and May three, completing the so-called rainy season, which was about an average one. The ordinary rain storm of this region is seldom very cold or violent. The winds, which in settled weather come from the north-east, veer round into the opposite direction, the sky fills gradually and evenly with one general cloud, from which the rain falls steadily, often for several days in succession, at a temperature of about 45° or 50°.

More than 75 per cent. of all the rain of this season came from the south-east. One magnificent storm from the north-west fell on the 21st of March. A massive, round-browed cloud came swelling and thundering over the flowery plain in most imposing majesty, its mossy front burning white and purple in the full blaze of the sun, while warm rain poured from its ample fountains like a cataract, beating down flowers and bees, and flooding the dry water-courses as suddenly as those of Nevada are flooded by "cloud-bursts." But in less than half an hour not a trace of the heavy mountain-like cloud-structure was left in the sky, and the bees were on the wing as if nothing more gratefully refreshing could have been sent them.

By the end of January four plants were in flower, and five or six mosses had already adjusted their hoods and were in the prime of life, but the flowers were not sufficiently numerous to affect greatly the general green of the young leaves. Violets made their appearance on the first week of February, and toward the end of this month the warmer portions of the plain were already golden with myriads of the flowers of rayed compositæ.

This was the full spring time. New species bloomed every day. The sunshine grew warmer and richer. The air became more tuneful from day to day with humming wings, and sweeter with the fragrance of the opening flowers. Ants were getting ready for their summer work, rubbing their benumbed limbs, and sunning themselves on the husk-piles before their doors, and spiders were busy mending their old webs or weaving new ones.

In March, vegetation was more than doubled in depth and splendor; claytonia, calandrinia, a large white gilia, and two nemophilas were in bloom, together with a host of yellow compositæ, tall enough to bend in the wind and show wavering ripples of shade.

In April, plant-life as a whole reached its greatest height, and the plain over all its varied surface was mantled with a close furred plush of purple and golden corollas. By the end of this month most of the species had ripened their seeds, but undecayed, still seemed to be in bloom from the numerous corolla-like involucres and whorls of chaffy scales of the compositæ. In May, the bees found only a few deep-set liliaceous plants and eriogonums in flower.

June, July, August and September was the season of rest and sleep—the winter of dry heat, followed in October by a second outburst of bloom at the very driest time of the year. Then, after the shrunken mass of leaves and stalks of the dead vegetation crinkle and turn to dust beneath the foot, as if it had been baked in an oven, *Hemizonia virgata*, a slender, unobtrusive little plant, from six inches to three feet high, suddenly makes its appearance in patches miles in extent, like a resurrection of the bloom of April. I have counted upward of three thousand flowers, ⅝ of an inch in diameter, on a single plant. Both leaves and stems are so slender as to be nearly invisible amid so showy a multitude of flowers. The ray and disk flowers are both yellow, the stamens purple, the texture of the rays being rich and velvety, like the petals of garden pansies. The prevailing wind turns all the heads round to the south-east, so that in facing north-westward we have the flowers looking us in the face. In our estimation, this little plant, the last-born of the brilliant host of compositæ that glorify the plain, is the most interesting of all. It remains in flower until November, uniting with two or three species of wiry eriogonums, which continue the floral chain around December to the spring flowers of January. Thus, although the main bloom and honey season is only about three months long, the floral circle, however thin around some of the hot, rainless months, is never completely broken.

How long the various species of wild bees have lived in this honey-garden nobody knows; probably ever since the main body of the present flora gained possession of the land, toward the close of the glacial period. The first brown honey bees brought to California are said to have arrived in San Francisco in March, 1853. A bee-keeper by the name of Shelton purchased a lot, consisting of 12 colonies, from some one at Aspinwall, who had brought them from New York. All the hives contained bees when landed at San Francisco, but they finally dwindled to one colony, which was taken to San Jose. The little emigrants flourished and multiplied in the bountiful pastures of the Santa Clara valley, sending off swarms the first season.

CONVENTION
NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*
Aug. 10—Maine State, at Harmony, Maine.
Wm. Hoyt, Sec.
Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.
Oct. 3-6—North American, at Cincinnati, O.
Dr. Ehrick Parmly, Sec., New York City.
5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.
Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

The National Convention.

The following is the official call of the Secretary, Dr. Parmly, for the Convention of the North American Bee-Keepers' Society. We hope there will be a large attendance:

The North American Bee-Keepers' Society will hold their 13th annual meeting at Washington Park Hall, Cincinnati, O., across Washington Park from the Exposition building. Time, Oct. 3rd to 5th, 1882. First session Tuesday, 10 a. m., Oct. 3. We are encouraged to hope that this will be a very profitable meeting, as we are promised papers from, and the presence of, a large number of our most prominent bee-keepers both in the United States and Canada, and essays and implements of the apiary are expected from abroad to add to the knowledge imparted by the research and inventive skill and methods of our countrymen.

Ehrick Parmly, *Sec.*
New York, July 12, 1882.

☞ The bee-keepers of Boone Co., Indiana, are invited to meet in Lebanon, at Barton Higgins' office, over Jaskson's bee hive, on the west side of the square, to organize an auxiliary County Association, on Aug. 10, 1882.

George J. Frey, }
Ora Knowlton, } *Executive Com.*
Jas. H. Orear, }

☞ The summer's meeting of the Cortland Union Bee-Keepers' Association will be held in Cortland, N. Y., on Tuesday, Aug. 8, 1882.

M. C. Bean, *Sec.*

SELECTIONS FROM OUR LETTER BOX

Will it Pay.—1. Could a person keeping about 25 colonies of bees find sufficient profit therefrom to pay his expenses, if the latter were very moderate, including an extractor and a few other necessary articles? 2. Would an apiary of 100 colonies of Italians produce an income of a few hundred dollars per annum?

ROLLAND MACDONALD.
Montreal, Quebec.

[1. Everything favorable, 25 colonies would give a handsome profit on running expenses.

2. Mr. Doolittle's report for 9 years, gives an average income of $1,380 per annum, with less than 100 colonies as basis; but he has, perhaps, been more than usually fortunate during the series of years. However, with the same judgment in the selection of location and assiduity in managing business, bee-keeping will pay as well as any other pursuit.—ED.]

My Season's Work this Far.—I had last fall in the yard and cellar of my own and neighbor's, 28 colonies; 16 of which were in Roop's winter protector hive. All wintered safely except one, which lost its queen; three more were in other winter hives and wintered successfully; and 9 in Roop's common hive and wintered in cellar, of which we lost 2; leaving 25 out of 28, all in fair condition. Most of them were very strong until within three weeks; the season was very wet; no honey was gathered through fruit bloom, except to keep up brood-rearing. The same through red raspberry bloom, here at Carson; Mr. Roop took 40 colonies of young bees and all on dry combs and foundation ten miles in the country, to a red raspberry patch, which filled up rapidly and filled one crate each, in a short time, ready to tier up. Then we had another dearth until three days ago, when they commenced on basswood, and yesterday and to-day are working very nicely. I have not secured 5 lbs of new honey as yet and have only extracted perhaps 10 lbs. of old honey this season. Nor have we had a swarm until to-day; the first one came out at 8 o'clock this morning. I have made 13 nuclei which are as strong as the parent colonies and ready to tier up for extracting. Other of our neighbors have been bothered with too much swarming, but those in Roop's winter protector can be nearly kept from swarming. We have 15 colonies in Roop's winter hives that have 27 frames covered with bees and a crate on top, all well supplied with bees and are putting in honey to-day at a rapid rate. Mr. Roop's bees at home have done no better than ours, unless it be by swarming which was caused by not letting them in the side chambers. All the honey we are to get must be basswood and fall honey; one rain would spoil all hopes for white honey.

OPHIR R. GOODNO.
Carson City, Mich., July 22, 1882.

Drones as Comb-Builders.—Seeing several articles lately on the use of drones, I will add my mite as a sort of mitigation for the "lazy fathers of the hive." M. T. French, a neighbor bee-keeper, came after me to extract some honey for him on the 1st inst. I took out about 400 lbs. for him, and while there I saw a colony of black bees, in an American hive, building comb on the front of the hive, and as there was considerable comb I began to watch them work. I saw fully one-fourth of the outside bees were drones, and they seemed to be as busy as the others. On a close watch I found them actually working the wax; yes, building comb, and Mr. French told me he had carefully watched them for nearly a week, and he was satisfied that they were actually building comb. We are having splendid rains. The mint (*Monarda punctata*) is freshened up, and the bees are again working finely on it and cotton, Jamestown weed, cockle-burr, "thorny careless," lambs-quarter, and other prairie flowers. I am trying to get up a statistical report of bee-keepers and number of colonies in the county. Will forward as soon as made out. Texas has been gloriously blessed this year. Plenty smiles over our fields, orchards and apiaries. God be praised for this abundance.

B. F. CARROLL.
Dresden, Texas, July 17, 1882.

Disposition of Bees.—The temper of bees is an effect, the causes of which comes from two sources, viz, inheritance, and treatment. My observations regarding their disposition (which have been more than ordinarily careful, since I have been breeding for good nature), have taught me that bees that are carelessly handled are the crossest; those let alone, next; those that are properly handled, gentler than either. This, as far as treatment is concerned. Breed from your gentlest and best honey-gathering colonies; never undertake to handle your bees, till you have settled the question of "who is boss," beyond all doubt. Smoke first and jar all you wish afterward, and your bees are not offended. Jar first, and smoke all you please afterward, and they show anger and resentment for days afterward.

JAMES HEDDON.
Dowagiac, Mich.

Transferring.—To-day is July 19, but, so busy have I been, that not until now have I read Mr. Heddon's article on "Progressive Transferring," in the BEE JOURNAL of July 12th. My article was written nearly two years ago, and was originally published in the *Country Gentlemen* of April 21st, 1881, instead of the *Rural New Yorker* as credited in the BEE JOURNAL. Since writing that, I have learned a better way of getting off the sides of the hives, and that is just exactly as Mr. Heddon describes it. I now fasten in combs, by tacking light strips of wood to each side of a frame, removing the strips after the bees have fastened in the combs. Mr. Heddon's method of drumming out is certainly convenient, but does it pay to allow a hive to stand queenless three weeks, the young bees "loafing" about, and fairly aching for some brood to care for? In all essays where the beauties of artificial swarming are dwelt upon, this one point, that of leaving no colonies queenless, is the leading "beauty." I have had no experience in thus leaving colonies queenless, and should be glad to know if, setting aside the getting of the combs emptied of brood, so that they can be made into comb foundation, whether it is any advantage to so transfer.

W. Z. HUTCHINSON.
Rogersville Mich., July 20, 1882.

Entomological.—I send you by this mail a box containing a beetle. Please tell what species, and whether beneficial or not; also some balls from an oak tree, with a leaf attached. An insect appears to have come out of each one; what is the cause of the balls, and tell something about the insect? If not too much trouble, please answer through the BEE JOURNAL.

R. VAN DUSEN.
Arcadia, N. Y.

[The beetle is *Alaus oculatus*, one of our largest spring or jumping beetles. The specific name oculatus comes from the large eye-like spots on the thorax. The beetle is gray with numerous dashes of black. The eye-like spots are velvety black, circled with gray. The length of the beetle is 1½ inches. Like all of the Elater family (Elateridæ), when placed on its back, it can by a bound regain its feet. The larva or grub eats the unsound wood in old apple trees. I have found it also in other trees.

The galls are the common oak apples. They are formed by an extra growth, due to the sting of an insect in this case, *Cynips confluens*, which belongs to the order Hymenoptera, and so is no distant relative of our bees. The sting is attended by egg-laying, and the larva which comes from the egg, feeds on the apple which the sting causes. The oak is a favorite with these gall-flies, there being many varieties of apples, and many species to produce them.—A. J. COOK.]

Poor Honey Season.—I started with 18 colonies, have increased to 51, taken 180 lbs. extracted and 56 lbs. of comb honey. Bees are Italians and hybrids, with one Syrian, which did the best for extracted honey.

J. C. MISHLER.
Ligonier, Ind., July 22, 1882.

Hanging Broad Frames.—I think it a great improvement to hang the broad frames of the surplus arrangement for comb honey upon metal rabbets, by means of ears or projections of sheet-iron bent at right angles and nailed on the end pieces of the frame, leaving off the top bar. The sections are much more easily handled where the top is open, while a blanket keeps them clean. Is there any patent on this arrangement?

RUSTICUS.

[We are not aware of any patent on the above described arrangement.—ED.]

Bee Stings for Deafness.—On page 441 vol. 18, No. 28 is an article headed "Not so Bright," from J. C. Thom, M. D. Streetville, Canada. who wishes to hear from other Canadian points, in regard to bee forage. White clover has been in bloom over three weeks, and seems to secrete plenty of honey, and bees are doing well with us. On the 27th of May, a bee friend from Waterloo, wishing to see an Italian queen in my possession; the day was a little rainy and foggy, and not very pleasant to open a hive of bees. However it was done, but we could not find her, on account of the heavy mist falling. I aroused the bees so that I was obliged to cover them up. In this I got stung on the back part of my left ear which has been deaf and of no use to me over 25 years. Two weeks later, I received another sting, but on the inside of the ear, close to the ear-drum, which was somewhat painful at the time. Thank fortune, the sting I received from those bees has restored my ear to hearing again.

JOSEPH M. WISMER.
Jordan Station, Ont., July 18, 1882.

A Large Yield in Maine.—There is now a fair prospect for a large yield of honey in Aroostook county. I never saw such a flow of the nectar as for the last 10 days, from Alsike clover, which is now in full bloom. We have had all we could do to furnish hives, fixtures, etc., for the bee-keepers in this vicinity, and for ourselves. We are running our apiary on Doolittle's plan, and have profited by so doing. I do not know how we should get along without the BEE JOURNAL. It comes to us regularly every week, with something new and interesting, and it is very encouraging to beginners to read how others are doing in different parts of the country.

HENRY TILLEY.
Castle Hill, Me., July 20, 1882.

Worst Season ever Known.—We are having, thus far, the worst season ever known in this locality for the production of honey. That "silver lining" does not make its appearance yet. Basswood is in full bloom; only one tree in five has blossoms, and not much honey from it yet. We heard of bees starving in the middle of June. Ours are building up nicely, and will probably get enough to winter with.

JOHN H. MARTIN.
Hartford, N. Y., July 21, 1882.

More Motherwort.—I send to you by this mail a sprig of flowers that grow wild in this part of the country, and it is covered with bees from morning till night. I would be obliged if you will inform me through your valuable BEE JOURNAL what is its name. I am a beginner in bee-keeping, and I like to work among them. I had 4 colonies this spring, in box hives, and sent for 2 Langstroth hives, which are occupied with black bees, and 3 colonies in American hives. They all seem to be very strong and are working well; but I have no surplus yet. They are now working in the boxes.

A SUBSCRIBER.
Elmira, N. Y., July 24, 1882.

[The specimen sent is motherwort, mention of which has been made several times in the BEE JOURNAL.—ED.]

No Honey Yet.—Prospects for a crop of honey are very poor. I have 125 colonies of Italian bees, and have not had one swarm yet, neither have I obtained a pound of honey. They will not average 2 lbs. of honey to the hive if I should extract every drop of it. They are full of bees. I think I shall get some basswood honey; it is not in blossom yet, being two weeks later than last year. Last winter was very open, and all the clover was killed. I have kept bees for 20 years, but never had them do so poorly.

W. C. WELLS.
Phillipston, Ont., July 17, 1882.

Not Discouraged.—Bees have done very poorly here this spring, but are doing well now on clover and various other plants. I put 7 colonies in the cellar last fall, lost 2 during the winter, and the rest I lost after taking them out in the spring. I think they starved, as they gathered no late honey last season and reared no brood, leaving old bees to winter. I was not discouraged, however, but purchased 3 colonies last spring and shall try again. A. J. ABBOTT.
North Paris, Maine, July 23, 1882.

Colored Bee-Keepers.—In ante-bellum days I was a slave-owner, and I believe I know the Southern negro as well as any one, and it is a notorious fact that there is a peculiar musky scent about these people not found in the white races; but. I dare say, this scent would not be more objectionable to our little pets than whisky or tobacco. I am well acquainted with a host of negro bee-keepers; one married a girl that formerly belonged to me, and I have often counted as high as 20 colonies in his yard. Jake Smith, f. m. c., near Dresden, has several colonies in American hives. Ben Younger, f. m. c., has several. He told me a few days ago his bees were doing well. It is true that this people are very superstitious, but if you will show me a man that is entirely free from superstition, I will show you hairs in the palms of your hands. They are taking some interest in fruits and bees, and are sending their children to the free schools, and the day is not far distant when scientific bee-culture will be practiced, or rather carried on, by these dusky sons of the Old World, as well as their more informed brethren.

Dresden, Tex. B. F. CARROLL.

This Year is "Badder."—Bees are doing very poorly here. The season was so wet and cold, the bees could do but very little in the way of collecting honey, although everything bloomed profusely in the early part of the season, such as apple, pear, cherry, plum, peach, and tulip trees, raspberry and blackberry. White clover was very scarce, owing to the drouth last year. The basswood or linden was a failure here this year. Last year was very bad here for bees, and as the little boy said, this year, so far, is "badder." We hope to get some surplus honey from fall flowers. Catnip and buckwheat are now in bloom, and blackheart (hydro-piper) will soon be. I have a small patch of sweet clover, and I think it is the "boss" bee plant for honey. I will have nearly an acre of it next year. I had 7 colonies in the spring; I now have 15, all strong except one.

THOMAS J. WARD, J. P.
St. Mary's Ind., July 25, 1882.

Hay for Shading.—Bees are booming on basswood, while I am writing, with the thermometer at 90° in the shade, and this suggests the importance of some kind of shade for our hives. We have tried putting on a handful of newly cut grass, timothy or some long grass is best, as by spreading a handful each way you have a protection to keep the sun from the sides of the hive. Before the grass gets too dry, put it away in the barns, and lay on a new crop. Thus you not only protect your bees from the sun, but do your "haying" at the same time. We have noticed that a colony works much better if shaded all day, than if left uncovered until they begin to roar with the heat.

G. W. STANLEY.
Wyoming, N. Y., July 24, 1882.

Prospect Yet Good.—Until now the prospect for surplus has looked blue, but basswood is just opening and we feel in hopes of a fair crop yet. The weather has become dry and hot and is more favorable for secreting honey. Last year basswood opened July 1st, and it has been our main reliance for surplus the past 3 years, and we esteem it the best honey we get. I had 12 acres of alsike clover in bloom this year, but it did not yield much honey. I think we are overstocked with bees here, which may be the principal reason why we do not get more clover honey.

W. H. S. GROUT.
Kennedy, N. Y., July 24, 1882.

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

THE AMERICAN BEE JOURNAL
OLDEST BEE PAPER IN AMERICA
ESTABLISHED IN 1861

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925 West Madison Street., **Chicago, Ill.**

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☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

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Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club :

For a Club of	**2**,—	a copy of "Bees and Honey."
" "	**3**,—	an Emerson Binder for 1882.
" "	**4**,—	Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" "	**5**,—	" " cloth.
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Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

◆

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., July 31, 1882.

The following are the latest quotations for honey and beeswax received up to this hour :

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for honey is quiet. Extracted brings 7@10c. on arrival. No comb honey on the market worth mentioning, prices nominal.

BEESWAX—Scarce, and brings 20@25c. on arrival.
C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey is light, prices being made to meet views of purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—White clover, fancy, 1 lb. bxs, 15@16c.; white clover, good to choice, 1 and 2 lb. bxs., 13@14c; buckwheat, 2 lb. bxs., per lb., 11@12c. Extracted and strained, white, 9@10c; dark 7@8c.

BEESWAX—There is a good demand for beeswax, and arrivals are quickly picked up. Prime lots have sold at 28c., and at the close 30c. is asked. Western, pure, 27@28c.; Southern pure, 28@29c.

D. W. QUINBY, 105 Park Place

CLEVELAND.

HONEY—Comes in very slowly, and is readily sold at 25c. per lb. for 1 lb. sections. No larger sections received yet. Our experience in the honey trade for the past 25 years, teaches that during the whole year there is no better sale for honey than August and September. The demand at this time is greater and prices as high as at any time during the year, especially for comb honey. Extracted probably sells better later. No extracted has thus far been received, but it could be quoted at 10@12c. BEESWAX—25@28c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—There is more inquiry, and an improvement in bids Considering the light stocks, considerable has changed hands within the week. Market for extra clear extracted and choice comb is quite firm.

We quote white comb, 16@18c.; dark to good, 8@12c. Extracted, choice to extra white, 9@9½c.; dark and candied, 7@7½c. BEESWAX—28@30c.

STEARNS & SMITH, 423 Front Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—New Texas comb (when the combs are perfect) brings 20@22c. Quote strained at 8@10c.; extracted at 12c. per lb.

BEESWAX—Prime in demand at 24@25c.

R. C. GREER & CO., 117 N. Main Street.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

* * *

Emerson Binders.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

TO COLORADO BEE-KEEPERS.

Send to J. L. Peabody for Apiarian Supplies, Pure Italian Bees and Queens. Bee Hive Manufactory, No. 376 Wasoola st., Denver, Col. 31w1t

QUEEN APIARY.—After Aug. 1st, I will sell 6 Italian Queens for $5, and 6 Cyprian Queens for $6. Purity, safe arrival and *satisfaction* guaranteed. For particulars, address REV. J. E. KEARNS, Morning Sun, Iowa. 31w1tp

W. Z. HUTCHINSON,

Rogersville, Genesee County, Mich.,

Makes a *specialty* of rearing fine Italian Queens. All queens bred from imported queens, and from the purest and best home-bred queens, and the cells built in full colonies. No black bees in the vicinity. Single queen, $1.00; six queens for $5.00; twelve or more, 75c. each. Tested queens, $2.00 each. Safe arrival by mail guaranteed. Send money by draft, registered letter, or by money order drawn on Flint, Mich. 26smtf

1882-Southern Headquarters.-1882

For Early Italian and Cyprian Queens;

Imported and Home-bred; Nuclei and Full Colonies. For quality and purity, my stock of bees cannot be excelled. I make a specialty of manufacturing the Dunham Foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Catalogue, giving directions for introducing queens, and remarks on the New Races of Bees. Address,

DR. J. P. H. BROWN,
5smtf Augusta, Ga.

HEADQUARTERS FOR THE

Golden Italians & Original Albinos,

BEES AND QUEENS.

Send for Circular. **J. M. C. TAYLOR,**
10smtf Lewistown, Frederick Co., Md.

Vick's Illustrated Monthly Magazine.

Each Number contains 32 pages of reading, many fine Wood Cut Illustrations, and one *Colored Plate*. A beautiful Garden Magazine printed on elegant paper, and full of information. In English and German. Price, $1.25 a year. Five copies, $5.00.

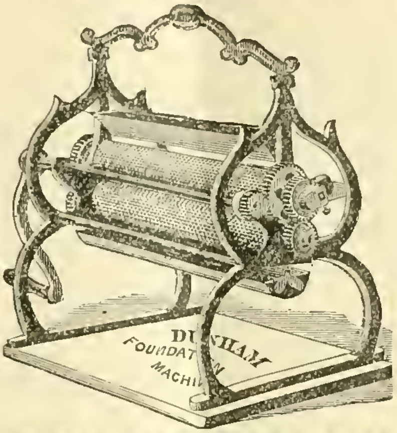
Vick's Flower and Vegetable Garden, 50 cents in paper covers; in elegant cloth covers, $1.00.

Vick's Catalogue—300 illustrations, only 2 cts.
Address, JAMES VICK, Rochester, N. Y.

FRANCES DUNHAM,

Inventor and Sole Manufacturer of

THE DUNHAM



FOUNDATION MACHINE.

Patented Aug. 23d, 1881.

☞ Send for New Circular for January, 1882.

CAUTION.

Having obtained LETTERS PATENT Number 246,099 for Dunham Foundation Machine, making comb foundation with base of cells of natural shape, and side-walls brought up to form an even surface; also on the foundation made on said machine, I hereby give notice to all parties infringing my rights, either by manufacturing said machines or foundation, as well as to all parties purchasing machines as above, other than of my manufacture, that I am prepared to protect my rights, and shall prosecute all infringements to the full extent of the law. **FRANCES A. DUNHAM,**
23m4t DePere, Wis.

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited and published by

C. N. ABBOTT, Bee-Master,
School of Apiculture, Fairlawn, Southall, London.

☞ We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 per annum.

Fruit Evaporators,

To be used on a common cooking stove, capacity 3 to 5 bushels per day. Price, complete, $10; in the flat, partly put together, for $6. A few agents wanted. For particulars and prices for Evaporators, Queen Bees, etc., address

JOHN H. MARTIN,
9sm1y Hartford, Wash. Co., N. Y.

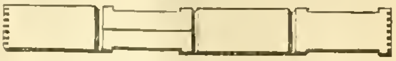
Be SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian, Cyprian and Holy Land Queens and Bees.

J. C. & H. P. SAYLES,
4sm15t Hartford, Wis.

MY 16-PAGE PRICE LIST of Italian, Cyprian and Holy Land Bees, Queens, Nucleus Colonies and Apiarian Supplies, will be sent to all who will send me their name and address on a postal card. **H. H. BROWN,**
14smtf Light Street, Col. Co., Pa.

HIVES AND SECTIONS.



We are in better shape than ever to furnish Bee Hives and Sections, having remodeled our machinery, and put everything in tip-top order for the coming season. We make a specialty of our

"BOSS" ONE-PIECE SECTION.

We have not sold any rights to manufacture, therefore we are the sole manufacturers in the United States. Send for Price List.

JAS. FORNCROOK & CO.
Watertown, Wis., Dec., 1881.

NOTICE—Some persons having infringed upon our Patent "One-Piece Section," we hereby give notice, that we shall prosecute all manufacturers. We shall not molest bee-keepers for USING those purchased before Dec. 1st, 1881, but hereby caution them against buying any except those bearing our stamp. It has been reported by some that it is our intention only to prosecute bee-keepers for using those One-Piece Sections heretofore purchased; this is wholly untrue and false.

JAS. FORNCROOK & CO.
Watertown, Wis., Dec. 15, 1881. 51mtf

HEADQUARTERS IN THE SOUTH

For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.

☞ Send for my Illustrated Catalogue.

5mtf **PAUL L. VIALLON,** Bayou Goula, La.

C. Olm's Comb Foundation Machine.

☞ Send for Sample and Circular.
18mtf **C. OLM,** Fond du Lac, Wis.

Italian Bees, Queens and Sections.

Untested Queens, in May, $1.50 each; in June, $1.25; July and after, $1; per dozen, after July 1, $10. Sent by mail, with directions for introducing. Italian bees by the half pound, same price as untested queens. One 2 comb nucleus, without queen (Gallup frames), in May $3, June $2.50, July and after $2; 2-comb nuclei, with the standard Langstroth frames, 25 per cent. more. Sections—Planed dovetailed sections, 4¼x4¼x1¾, $4.50 per 1,000; 5½x5½x1¾, $5 per 1,000. Sections of this thickness do not need tins between them to insure straight combs, and the bees can ripen up and seal honey faster than in combs with deeper cells. See testimonials in March number of *Gleanings*. Please remit by P. O. money order, by registered letter, or by draft on New York or Chicago. Address.

O. H. TOWNSEND,
19mtf Kalamazoo, Kalamazoo Co., Mich.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to A. I. ROOT, Medina, O.

1882.--QUEENS--1882.

I am now booking orders.

Warranted Italian Queens $1.00, six for $5.00; Tested do., after June, $1.50. Cyprians, Unwarranted, $1.00, six for $5.00. Send for circular giving description and recommendation from Postmaster and county officers. Money order office, Versailles, Ky. **J. T. WILSON,**
1mtf Mortonsville, Woodford Co., Ky.

1882. JOSEPH D. ENAS, 1882.

(Sunny Side Apiary,)

Pure Italian Queens,

BEES, COLONIES, NUCLEI,

Extractors, Comb Foundation, etc.

Address, **Sunny Side Apiary,**
9m8t Napa P. O., Cal.

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. *Sells at Sight.* Double your money. Address Dr. Chase's Printing House, Ann Arbor, Mich. 36m1yp

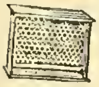
AT LULING, TEXAS.

I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.

14w39t **J. S. TADLOCK.**

FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

PRIZE QUEENS FOR 1882.

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

---

EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book.

☞ For sale at the BEE JOURNAL Office. ☜

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **24c.** per pound, delivered here, Cash on arrival. Shipments solicted.

To avoid mistakes, the name of the shipper should always be on each package.

ALFRED H. NEWMAN.

923 West Madison Street, CHICAGO, ILL

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65 *ENGRAVINGS.*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

$777 A YEAR and expenses to agents, outfit free, address **P O Vickery Augusta, Maine.** 36w1y

---

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1w1y **D. S. GIVEN & C.,** Hoopeston, Ill.

FREE! FREE!

Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.

11w6m E. A. THOMAS & CO., Coleraine, Mass.

DUNHAM COMB FOUNDATION—40c. per pound; extra thin and bright, 10 sq. ft. to the lb. 48c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13w1y

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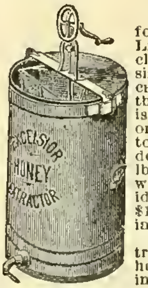
THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

EXCELSIOR

HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13	inches	........$8 00
For 2 Langstroth "	10x18	"	.... 8 00
For 3 " "	10x18	"	........10 00
For 4 " "	10x18	"	........14 00
For 2 frames of any size,	13x20	"	........12 00
For 3 " "	12½x20	"	........12 00
For 4 " "	13x20	"	........16 00

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

HONEY

For the past few years I have made this excellent food my leading article. Having the best established reputation in this city as a dealer in PURE HONEY direct from the Apiaries, enables me to obtain the highest market prices. Your consignments and correspondence respectfully solicited.

R. A. BURNETT, Commission Merchant,
Successor to Conner, Burnett & Co.,
28w13t 161 So. Water Street, Chicago, Ill.

---

100 Colonies

FOR SALE. ALSO,

TESTED AND DOLLAR QUEENS

AND

BEES BY THE POUND.

Send address for prices.

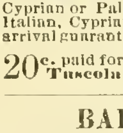
1w35t **JAMES HEDDON,** Dowagiac, Mich.

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:



—"Low Prices, Quick Returns; Customers Never Defrauded."
Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1w1y.

BARNES' PATENT

Foot Power Machinery

CIRCULAR AND
SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents**; in paper covers, **50 cents,** postpaid.

925 W. Madison Street, Chicago, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. - Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

☞ **A Liberal Discount to Dealers the Dozen or Hundred.**

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
1wly Hamilton, Hancock Co. Ill.

We now quote an

Advance of 5 Cents per pound

on the PRICES PRINTED IN OUR CIRCULARS, wholesale or retail. 15wtf

INQUIRIES

CONCERNING

THE CLIMATE,

Mines, Manufactories and Commerce

OF

COLORADO,

will be promptly and truthfully answered by private letter, upon sending One Dollar to the

Woman's Industrial Association,
15w6mp 291 Sixteenth St., **DENVER, COL.**

Advance in Foundation.

The manufacturers of Comb Foundation have advanced the price 5 cents per pound, owing to the increased cost of Beeswax.

Until further notice, the price of all the styles and kinds of Foundation, except the VanDeusen (flat bottom), will be

Advanced 5 Cents per pound,

from the advertised price in my Catalogue.

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL

Excelsior Dunham and Vandervort *FOUNDATION.*

Owing to the large advance in the price of wax, I now quote prices thus: Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

J. V. CALDWELL,
3wly Cambridge, Henry Co., Ill.

1882.-ITALIAN QUEENS.-1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby smoker for $1.50. Address all orders to

L. J. DIEHL,
(Money Order Office)—Butler, Dekalb Co., Ind.
10wtf

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
13wtf Abronia, Mich.

LOOK HERE!

If you want cheap bees and hives to suit, good Cyprian, Albino or Italian Queens, Comb Foundation, all kinds, Section Boxes, and everything a live apiarist needs, send for prices.

Full Colonies and Nuclei a Specialty

with good young Queens. Give me a call, friends, and I will try and please you. (Box 819)

E. T. FLANAGAN, Rose Hill Apiary,
5wly Belleville, St. Clair County, Ill.

Florida Land--640 Acres

CHEAP FOR CASH.

DESCRIPTION,—Sec. 4, township 7, south range 7 west, Franklin county, Florida, situated about 50 miles south of the Georgia line, 25 miles west of the city of Tallahasse, the capital of the State, and about 25 miles northeast of the city of Apalachicola, a seaport on the Gulf of Mexico, and within 2 sections (5 and 6) of the Apalachicola river; the soil is a rich, sandy loam, covered with timber.

It was conveyed on Dec. 31st, 1875, by Col. Alexander McDonald, who owned 6 sections, including the above, to J. M. Murphy, for $3,200, and on Sept. 5th, 1877, by him conveyed to the undersigned for $3,000. The title is perfect, and it is unincumbered, as shown by an abstract from the Records of the county, duly attested by the County Clerk; the taxes are all paid and the receipts are in my possession.

I will sell the above at a bargain for cash, or trade for a small farm, or other desirable property. An offer for it is respectfully solicited. Address,

THOMAS G. NEWMAN,
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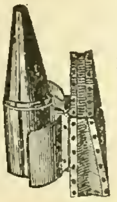

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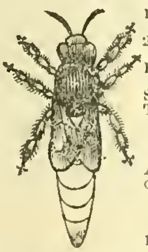

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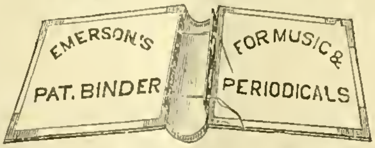

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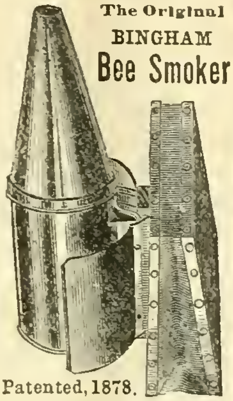

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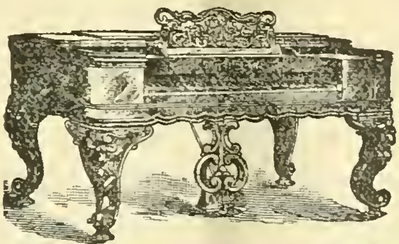

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TOPICS PRESENTED THIS WEEK.

Editorial—

Latest Prospects for honey.................. 497
Bee-Keeping in our University.............. 498
Editorial Items 498, 500
Rev. L. L. Langstroth 500
Death of Mr. A. F. Moon................ 499
The National Convention....................... 499

Among Our Exchanges—

Breeding the Best Queens..................... 500
Bee Pasturage.. 500
Still Breeding 500
Bees Fertilizing the Clovers.................. 500
The Difference 500

Correspondence—

Theoretical Bee-Culture......................... 501
St. Joseph, Mo., Inter-State Exposition... 501
Premiums 501
Sweepstakes 501
Special Premiums................................. 501
Bee Notes from Mississippi.................... 501
Winter Temperature Required by Bees... 502
Bee Department of the Tri-State Fair 503
Premiums.. 503
That Professorship 503
Comb Foundation-Making in Germany.... 505

Convention Notes—

Local Convention Directory................... 504
National Convention...... 504
Bee-Keeping and Other Pursuits 505
To Bee-Keepers in Florida 506

Selections from Our Letter Box—

Fall Transferring.................................... 506
Hybrid Bees.... 506
Bees in Arkansas 506
Bees in Colorado..................................... 696
Beautiful Foundation.............................. 507
Journeyings in America.......................... 507
Real Encouraging.................................... 507
Returning Swarms................................... 507
Making Up for Lost Time...... 507
The Honey Wave.................................... 507
Progressive Transferring........................ 507
Introducing Queens................................. 507
Dysenteried Nuclei.......... 508
Progressive Transferring 508
Which Queen Goes?................................ 508
Bees Doing No Good.............................. 508
Breeding Up... 508
Honey from Daisies 508
Maple Sugar... 508
Prospects Brighter 508

Latest Prospects for Honey.

Districts where but a short time since only discouragement and doubt prevailed, are now beginning to assume a cheerful aspect. Kentucky, perhaps, started out early in the season with the brightest prospects of any State, but an abrubt change in the wind-current, followed by snow, frost and cold rains, soon destroyed all hopes of an immense spring yield, but left the bees generally with sufficient stores for summer consumption, and since that time colonies which were previously strong have been but self-sustaining. A few weeks ago Mr. John C. Peden, of Lawrenceburg, that State, wrote very discouragingly. Now, however, he writes that bees are working "on both red and white clover, and that in comparison with the past they are like a tornado. Sections that have been on the hives for six weeks, in a half-finished condition, are being finished up, and new ones started in a way that is real encouraging." With Kentucky's notoriety for fall flowers—asters, etc.—we anticipate there will yet be a good yield in that State. Last season the bulk of their crop, if we remember rightly, was obtained in September, October and November, after all hopes of a surplus had been abandoned.

From New York, Mr. G. M. Doolittle supplements his former gloomy notes, with a postal dated July 29: "The past three days have been splendid for bees. The combs which showed nearly starvation for the bees a few days ago, are now glistening with honey, and *enough has been already stored for a winter supply.* A few have commenced work in the boxes.... Am thankful for the winter supply already obtained." Mr. G. T. Wheeler, of Mexico, in the same State, writes under the same date: "Blossoms commenced to open, accompanied with honey weather, and the bees work as though they expect to make up for lost time. I expect to hear that Doolittle's bees have stored basswood honey by the ton the past week." From the other backward districts of New York we expect to hear equally as good reports, with the addition, perhaps, of cheering prospects for a heavy fall yield. Should fall frosts be tardy in coming, New York, we think, will generally report very large fall yields.

In the district in Iowa where prospects were least encouraging, a complete revulsion has taken place, and the yield is almost without a parallel. Mr. William Malone, Oakley, Iowa, in a letter of July 27th, says: "after waiting and feeding so long, the honey wave struck us July 10th, and I never saw such a heavy yield as from that time until the present." Mr. Malone hived a swarm July 15, in a 2-story Langstroth hive, with 20 frames of foundation. In 8 days he extracted 40 pounds of honey from the second story, and the lower one was full.

The latest advices from Messrs. Dadant & Son, at Hamilton, Ill., in the Mississippi Valley, report the "bees still booming." In that district last season the honey harvest was very light, owing to the drought, and the above parties were obliged to adopt the migratory system with their colonies to reach honey bloom. Mr. J. Lee Anderson, at Lawrence, McHenry County, Ill., Aug. 4, says: "We are having the largest honey crop this section ever witnessed. A second crop of white clover is coming on where one has been cut off for hay. The increase of swarms is over one hundred per cent."

In our own neighborhood the late swarming is unparalleled. Frequent rains, with a hot, humid atmosphere, have encouraged honey secretions, and, although the bees can only work at intervals, it is wonderful to contemplate the honey they gather. Should frosts be tardy in their appearance, the asters, goldenrods, Spanishneedles, heartsease, bergamot, and other honey-producing flora will be most abundant; and the excessive breeding yet being kept up, will give ample opportunity to gather fall honey for winter stores, besides a liberal surplus for market. White clover at this writing (Aug. 5) is yet as plentiful as ever, but deserted for the magnificent sweet clover (*Melilotus alba*).

Yet, with the prospective liberal production of honey this season, bee-keepers need borrow no anxiety about prices. In Europe the crop promises to be very light, while in California there will be comparatively none for export. Agents of European and Eastern houses have found it impossible to have their orders filled there, for a strictly first-class article, and will have to look to the Eastern markets and those of the Central States to supply the demands of trade, while the foreign consumers will be obliged to draw on the Atlantic, instead of the Pacific Coast. Beeswax is already ranging at fabulously high figures, and we now believe will never decline to its former quotations. We therefore advise all to put up their honey in first-class marketable shape, properly grading it, and to make no sacrificial sales in order to effect an early disposal.

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Bee-Keeping in Our University.

We cannot now recall the name of a solitary apicultural writer of prominence, whom we would prefer to have criticise the editorial matter or general management of the American Bee Journal, than Mr. James Heddon or Rev. Wm. F. Clarke. Both are independent in their opinions, ingenuous in their expressions, and candid to admit it when convinced of error. On pages 501 and 503 of this number, they have reviewed the editorial which appeared on the first page of our paper of July 26th, and to save space we will answer both articles with one.

First, without wishing to rob Mr. Clarke of his introductory consolation, we must insist he is no "peacemaker;" as between Mr. Heddon and ourself there is no dispute—perhaps scarcely a controversy—and we believe not a difference of opinion regarding apiculture in our University, when that gentleman has maturely considered the subject.

Mr. Heddon has partly understood our position, and so far agrees with us; but in order more fully to explain we must review his several propositions in order. If we must have theories, then, of course, we want *correct* theories; but less of theories and more of *scientific facts*—sound, hard, solid facts—are what we need, and so long as each must grope along in the theoretical wilderness, with but the glimmering hand-lamp of a half-obsolete theory to guide him in his search, he may pass and re-pass the scientific truth, and not be able to recognize it. Nor do we think that by practice alone—real bread-and-butter practice—will we be able to "separate the correct from the incorrect," except upon scientific principles; therefore, we would have a practical apiary in connection with the University, where science can test and demonstrate all the abstruse facts which go to make successes and failures in bee-keeping. We would have the apiary self-sustaining if possible, but certainly its continuance should not be dependent alone upon the amount of revenue, *i. e.*, "food and clothing" it earned. Nor would it be a generous valuation to expect the scientific knowledge gained to be equal to the capital required to "stock an area of one apiary's flight."

It certainly would be no detriment to the graduated student to spend a season in some practical apiary, run upon scientific principles, even though "the necessity for dollars and cents" was its corner-stone, and every comb of honey represented a feast for a famishing family. Even the backwoodsman with his rimless hat, and shirt-sleeves and breeches serrated at the elbows and knees, found it a long fast watching for the exit of a woodchuck from the stone-heap in which there was none; and still there was no other meat in the house. Necessity may be a stimulous, but is not the guaranty of success. It is not the practical laborer whose family eke out a subsistence on the fruits of his toil, that does most in webbing our country with railroads, but the engineer who plans his work; to the men who drive the nails and place the bricks we are not most indebted for our wonderful factories and magnificent houses, but the science-cultured brain that tells them where to drive the nails and how to place the bricks. And so with all successful professions and labor. The practical labor is necessary to completion; but the scientific preparation is necessary for conception and oversight or direction.

If the University education will polish and enlarge the talents for bee-keeping, the practical will quite rapidly follow the acquisition of the science. Tact, as commonly applied, is but a make-shift for the present, while talent insures a success in the future, and perhaps after the emulative strife between the apiarist who runs with tact as his sole guide and he who has talent for his support, it will be found that the latter's five colonies, at the end of a series of years, have netted more profit than tact's initial fifteen colonies.

With Mr. Heddon's fourth paragraph we cordially agree in the main; but to his fifth we must take exceptions, and will answer his closing question, Yankee style, by asking another: Were you employing a superintendent for your extensive apiary for a series of years, and the choice was offered you between a graduate of the Michigan Agricultural College with a view to making apiculture a specialty, and one who had received a year's practical experience in some extensive apiary where tact was the system adopted and bread-and-butter the motive, which would *you* employ, all other things being equal? Would you not expect to devote as much time to weeding out pernicious theories, inculcating wholesome precepts, and creating proper conceptions, with the latter, as would make the former his superior? Let us make the question more abrupt: How many thoroughly practical apiarists, in the United States, have you in your mind's eye that you consider competent to impart a practical education, even in two or three years, that will insure success. unless science be combined with it? We cannot now recall even one successful apiarist, much of whose time has not for many long years been occupied in acquiring a scientific education, and whose every progress in science has not been dearly bought with a reverse—and why? Because the dollars-and-cents standard of the apiary allowed of no interruption in its practical working to investigate scientific problems, until dire necessity forced the solution on the apiarist, and it became a matter of choice between obviation and ruin.

Mr. Clarke eloquently eulogizes Prof. Cook, and we believe he reverences him as a scientist and respects him as a man, yet we think he does him great injustice with his doubt. That the Professor has never felt called upon to abandon an eminent position, where the benefits derived from his instructions cannot be estimated by dollars and cents, to demonstrate that he is eminently practical, should give rise to no doubt of his ability. But were it so, then how necessary that we should have a Professor of Apiculture, to whom we can look for the scientific facts in connection with our favorite pursuit, knowing that no one in our ranks is comprehensive enough to demonstrate all its branches.

Mr. Clarke agrees with Mr. Heddon, and we agree with Mr. Clarke, and have often so stated, that in the future much of the honey of commerce will be produced by specialists. If we are right in our surmise, then how necessary that every facility be afforded to acquire the fullest preparatory education. What argument can be adduced to promote education in the natural sciences, that will not apply with equal force to apiculture in our universities? Where is the State or community that would not receive its proportion of benefit, through an increase in revenue, if this were one of the higher branches taught? The future history of bee-keeping would not show so many vacant places, caused by the dropping out of those who had placed reliance upon their fancied practical skill, and whose confidence advanced them beyond their scientific attainments.

We raise no objection to the establishment of a practical apiary, provided it be under the jurisdiction of the Professor, for it is as absolutely necssary he should have the best facilities for solving his problems and demonstrating their solution, as that the chemist have his crucibles, the astronomer his charts, and the engineer his compasses.

Death of Mr. A. F. Moon.

We learn with regret that Mr. A. F. Moon, of Rome, Ga., died at his home, at 4 a.m., on Wednesday, Aug. 2, 1882, aged 58 years.

Some of our readers will remember that Mr. Moon wrote us a private letter, dated Jan. 16, 1881, concerning his misfortunes, and feeling assured that bee-keepers everywhere deeply sympathized with him, we published a portion of it on Feb. 9, 1881, as follows:

> The past has been a most unfortunate season with me. I have received no honey, and had no queens or bees to sell, and have not been able to transact any business, on account of my lameness, which ended in the loss of my limb. In fact, I was compelled to go on crutches all the seeson. I am somewhat better now, but have not been to our postoffice since the 11th of last May, which is only 2 blocks from me. This, you know, is hard for a man accustomed to walking and stirring around. The Weekly came in to-day's mail, which just fills the bill; it is just what all bee-keepers want—a Weekly BEE JOURNAL. Long may it live, with success to its editor.

For several weeks it was known that the amputation of the entire leg would be necessary, and this was finally submitted to as a dernier resort to save life, on Tuesday Aug. 1, 1882, but, alas, he died the very next day.

Mr. Moon obtained his two first colonies of bees in 1834, when he was 11 years of age, by hiring out to get the means to purchase them: he kept bees continually up to the day of his demise—always keeping abreast of the times, by giving the fullest energies of his active mind to progressive, practical and scientific bee-culture; he was a specialist, and at home in every department of apiculture.

He helped to organize the "Michigan Bee-keepers' Association," was one of its first executive committee, and became its second President. At the meeting which organized the "North American Bee-keepers' Society," he was elected Chairman, and though the Rev. L. L. Langstroth was elected its first President, being absent, Mr. Moon presided over the first National Convention, in 1870.

In 1873, he moved to Georgia, and at Rome edited and published *Moon's Bee World* for three years, when it was suspended and its subscriptions unfilled, were supplied by the AMERICAN BEE JOURNAL.

Since then his health has been declining, and mortality has been struggling for the mastery. About a year ago he commenced an article for the BEE JOURNAL in these words:

> "Time, with his sickle, is mowing the days and hours. Seasons come and go; days and months, like the seasons, succeed each other. Summer, with all the joyous anticipations that could be produced by the warm and genial rays of the sun and change of the season, will soon give place to autumn, and this to cold, bleak winter."

At least "the winter of death" has come to him. His later articles were written while he was suffering great pain of body, but now that is all over—mortality has triumphed and our friend has been laid low by "the all devouring scythe of time." His busy life is ended, and his race is run! All that is left to us now is to draw "the mantle of charity" over his short comings, emulate his earnestness and zeal, and when we, too, are called upon to pass through "the valley of the shadow of death," let us hope to be as peaceful and confiding as he!

The National Convention.

We have received from Prof. Cook the following circular relating to the above convention. We greatly regret we shall not be able to attend, but circumstances beyond our control will make our absence imperative. We regret it more especially, as this will be a most interesting meeting, and those who can attend will be more than repaid the expense and loss of time:

> The next meeting of the National Bee-keepers' Association promises to be a grand success. Such men as D. A. Jones, A. I. Root, James Heddon, O. O. Poppleton and Dr. J. P. H. Brown have promised attendance.
>
> It is expected that the Association will visit in a body, the apiary of Mr. Hill, of Mount Pleasant, which is one of the best conducted in the States.
>
> Mr. D. A. Jones will exhibit specimens of the bees of the Indies, including the famous *Apis dorsata*.
>
> There will also be exhibited at each intermission, miscroscopic preparations, showing structure of the sting, mouth-parts, etc., and of the so-called dry feces of bees.

Let some bee-keeper of each leading city look after railroad rates. It will be the last week of the great Cincinnati Exposition. This is a great attraction, and will make it easy to secure reduced rates. Round trip tickets from Detroit are promised for $5. A. J. COOK, *President.*

Rev. L. L. Langstroth.—We have received the following letter from Mr. Langstroth, which we know will be read with more than usual interest by the thousands of apiarists who have a tender regard for him, and wish him health for years yet to come.

Oxford, Ohio, July 26, 1882:

My health for the last few months has considerably improved, but not enough to permit me to resume my pen with any freedom. In the 45 years since I began to keep bees I have never known so poor a season for honey. The strongest colonies of some of our largest bee-keepers have not a cell of sealed honey, and only a few days supply on hand, and yet the bloom of white clover has been and still is unusually good, and the weather apparently all that could be desired.

Very truly your friend,
L. L. LANGSTROTH.
Oxford, July 26, 1882.

☞ The Amerian Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

Paid orders are filed in the Treasurer's office, and always accessible for reference, and the remitter gets a receipt for money sent.

For safety, when sending money to this office, all should get either a post office or express money order.

☞ One of our exchanges says: The Montreal *Witness* has been to the expense of getting a special telegram from Toronto which says: "A young lady at Riverside Suburb has been severely injured about the face and neck by bees which were attracted by the profuse trimmings of artificial flowers on her hat." The Canadians who will believe that will believe anything.

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Bee Pasturage.—The *Indiana Farmer* has this to say about providing pasturage for bees:

The necessity for providing pasturage for the bees is becoming more apparent each season. As the land becomes better tilled, many of our best honey producing plants become extinct. There are many plants that yield immense quantities of honey, and by studying the habits and time of blooming, will give us an idea of what to plant to keep up a rotation of blossoms, so that there need be no total cessation of the honey flow from early spring to frost. Our roads and by-ways are lined with worthless weeds, but with a little care they may be filled with honey producing plants. Sweet clover, catnip, mother-wort, borage, boneset and figwort, are all good honey plants, and bloom from the first of July to frost. Whether it will pay to crop for honey as is now done for butter or milk, we are not as yet certain, but the question is being thoroughly discussed, and will lead to positive facts in the near future. Many acres of honey plants have been sown in the last two years, and we hope to have some reports of practical tests before long. A friend of ours has a couple of acres sown to several kinds of mints, and he is very enthusiastic over the result. He gave us a sample of a very aromatic flavor and fine in appearance, and says also his entire crop of last year was flavored with the mint, giving much satisfaction to his customers, many of whom preferred it to the clear white clover honey.

Bees Fertilizing the Clovers.—The *Farmer and Manufacturer* for August gives the following item on this subject:

Darwin's researches have proved the action of bees in fertilization of flowers. Every farmer who grows red clover for the seed sake is too familiar with the uncertainty of this crop, the seeds of which ripen with most vexatious inequality. Herr Haberlandt, who has followed up and confirmed the researches of Darwin in reference to these particular flowers, strongly recommends the rearing of bees on all clover farms for the special purpose of fertilization, even though their honey be disregarded, for it appears that clover is entirely dependent on insects for its fertilization, and chiefly on bees. The form of the flowers and the manner in which the maturity of the lower florets precedes that of the upper florets, renders the success or failure of a clover-seed crop simply a result of the employment or non-employment of these humble farm laborers.

Breeding the Best Queens.—The *Grange Bulletin* gives its views on this subject in the following language:

We deem it a very great mistake to suppose that the queen that can lay the greatest number of eggs in a given time is therefore a desirable queen; but if a queen bee is capable of laying 500,000 eggs in a life time, shall we have them laid in two or four years? We should prefer their being laid during the longer period. All such questions should be well studied and properly digested by the apiarist as well as giving a strict adherence to natural laws governing the bees. When we look into the laws that govern the production of animal life, we find that one law obtains from man down through all the grades of lower animal life, viz., "The animal after his kind." While climate and surroundings have their influence, man is still man, whether barbarous or enlightened, and his domestic animals when bred with any special peculiarity or trait in view, have developed the traits desired, while there are many desirable traits in our present strain of Italian bees that should be fostered in breeding. Queen breeding is a mechanical art, and should be better understood by those who make such loud professions and furnish too many cheap and worthless queens for the unsophisticated novice, who too often meets disaster and loss for want of a better knowledge of the true principles that should govern all business connected with successful and practical apiculture. Avoid all queens reared in small nuclei or weak colonies.

Still Breeding.—The *Indiana Farmer* gives its views of the prospect of the remainder of the season for bees, and their conditon for winter, thus:

Usually there is a dearth of honey-producing flora from the middle of July to the latter part of August. But the copious rains of early summer, and cool nights have retarded the growth of white clover, and induced the growth of fall flowers to such an extent, that the bees are still finding work to do. Weak colonies and nuclei are breeding very fast with a prospect of going into winter quarters in good condition.

The Difference.—From an exchange we glean the following amusing paragraph:

When an old-fashioned merchant in New Jersey came to look over an order made out by his new-fashioned clerk, the other day, he looked up over his spectacles, and said, "James, I see you have spelled shugar without an h." "Yes, sir, that's the proper way." "But I have spelled it with an 'h' for the last twenty-nine years." "Can't help that, sir. Sugar should not be spelled with an 'h.'" "Well, mebbe it shouldn't," sighed the old man, "mebbe it shouldn't. I presume that this mixing in glucose does make a difference somewhere."

CORRESPONDENCE.

For the American Bee Journal.

Theoretical Bee-Culture.

JAMES HEDDON.

I think I can accord with the BEE JOURNAL in regard to the value of theory. The editorial on the first page for July 26th. contains about the facts in the case. We want theories—*correct* theories—and the only way that I know of to separate the correct from the incorrect, is by *practice*. If you mean that the apicultural part of the University shall teach the theories of bee-culture only, I am exactly in accord with your ideas; but if there is to be a small theoretical apiary connected with the University—one that has no food and clothing anxiously looking and longing for, and depending on its success, and this arrangement, together with its scientific, theoretical teacher, is expected to turn out pupils that shall be practically equal to the amount of capital it will require to stock an area of one apiary's flight—here is where we differ still.

Every graduate from this University will need to serve an apprenticeship in some apiary run to the necessity of dollars and cents. I have more faith in the capture of the woodchuck when "you've got to get him. there is no other meat in the house."

This University apicultural education will polish and enlarge one's talents, but polished talent so often fails where practical tact succeeds, that the bystanders all wonder. To be sure, talent attracts admiration, but tact commands respect. Talent's 5 pounds of honey is not worth as much as tact's 15 pounds—not to eat—only in some minds.

This theoretical education is a grand step towards fitting one's self for a practical one to follow it; but this latter education will hardly be obtained at any school, with or without an apiary attachment, and any attempts made in that direction will, I think, be abortive.

Please place before your mind's eye two young men, one just from our Michigan State Agricultural College, the other from a year's practice at work in a large honey-producing apiary—both just starting for themselves with 50 or 100 colonies—which would you expect to succeed best?

Tact, or the right way of doing the right thing, is catching, and to be caught one must come in contact with those who have that practical complaint. To the teaching of any correct theory, all hail; but I hope I am not to understand this schooling to stand for a competency? I think I do not understand you so, and this argument is only made to show why I wrote as I did in the BEE JOURNAL of July 26th. when I understood that the school was expected to turn out scholars for the successful proprietors of apiaries.

Dowagiac, Mich.

For the American Bee Journal.

St. Joseph, Mo., Inter-State Exposition.

R. S. MUSSER.

The following is the premium list of the Apiarian Department of the Inter-State Exposition to be held at St. Joseph, Mo., on Sept. 4 to 9, 1882, of which Mr. D. G. Parker has been appointed superintendent:

PREMIUMS.

Display of Italian bees, 1st prem., $5; 2d prem., $3.

Display of black bees, $2; $1;

Display of queen bees, $3.

Display of imported queen bees, $5.

Display of beekeeper's tools, implements and fixtures. Only dealers in these articles can make this entry, $15.

Best and largest display of honey in comb, $10; $5.

Best and largest display of extracted honey, not less than 25 lbs, $5; $3;

Largest assortment of seeds for honey plants, $2.

Exhibition of a colony of bees in hive, including their handling and best method of subjugation to be practically illustrated on Friday, Sept. 8, 1882, $5.

Honey extractor, $2.

Honey knife, diploma.

Bee smoker, diploma.

Atomizer, diploma.

Bee feeders, diploma.

Comb foundation, diploma.

Felt blankets, for covering brood frames, diploma.

Bee veils, diploma.

Gloves, rubber gauntlets, diploma.

Sections all in one piece, diploma.

Sections, dovetailed, diploma.

Wax extractor, diploma.

SWEEPSTAKES.

Best display of honey, $25. Exhibitors competing for sweepstake premium will not be permitted to enter same honey for other premiums.

For largest and best display of comb honey and in the best marketable condition, $25. The honey entered for this premium must be from the apiary of the exhibitor, and must not be entered in any other class.

SPECIAL PREMIUMS.

By O. A. Sandusky, St. Joseph, Mo., for the best display of comb honey, in 1 or 2 lb boxes, $5.

Also, for the best crock or firkin, not less than 20 lbs, $5.

The Secretary is authorized by Hon. Jas. N. Burnes to purchase and pay for 20 lbs of premium honey, awarded a lady resident of any other State than Missouri, $20.

The Secretary is authorized by Hon. Jas. N. Burnes to purchase and pay for 30 lbs of first premium honey, awarded a Missouri lady, $30.

Gen. James Craig, of St. Joseph, Mo., will purchase and pay for the best 30 lbs of comb honey, exhibited in 1 or 2 lb boxes, $15.

These premiums, amounting to $191, are very liberal—more so than any other association has offered. A large number of persons have commenced the "bee business" since our last exhibition, and the display will, no doubt, be large, notwithstanding the honey season has been anything but satisfactory so far. It has been too wet and cold, giving but little honey from white clover. If it continues as warm for the next two weeks as it is at present, we can rely on a good display of comb honey at our exposition. So far, only those who fed their bees in the months of March and April have taken off any surplus honey.

I am satisfied that the only way to manage an apiary in the early spring, is to feed the bees three table spoonfuls of pure sugar in a saucer filled with water every morning. It should be placed where the bees can reach it without being exposed; this will insure a populous colony ready to go to work when the honey season opens. It makes no difference how much honey the bees have on hand; this plan will pay.

St. Joseph, Mo., July 27, 1882.

* * *

For the American Bee Journal.

Bee Notes from Mississippi.

OSCAR F. BLEDSOE.

The season this far in this locality has been encouraging for bee-culture. It is being fully demonstrated to me, that an apiary well managed will pay well here. I have sold a quantity of honey in this town in the 1 lb. section, though heretofore honey has been very slow sale as brought in from the country in buckets, etc. The 1 lb. section, with a beautiful comb of honey in it, seems to be irresistible. I have on now 2,000 of them that will soon be full. As to the increase of bees, there seems to be no limit to possibilities in that direction. I commenced the season with 45 colonies; lost about 15 swarms from not having queens' wings clipped, and now have 130. My trouble has been too much swarming; I checked it all I could. Many of my hives were too small. Severe experience has taught me to clip the wings, or one wing, of every queen, and to prepare large roomy hives and plenty of them before swarming season commences. It takes about 4,900 cubic inches inside measure for a powerful colony of pure Italian bees in this locality, and then the surplus has to be depleted regularly during honey flow.

I am now supplying all hybrid and black colonies with pure Italian queens. I rear my queens thus: Take 2 or 3 frames, with bright comb, and place them in the colony you breed from, so that they can be easily gotten at and removed. Look at them every morning. As soon as the queen gets on one of the combs she will fill both sides with eggs as far as honey will allow her. When you have eggs, remove the comb. You now have eggs laid within 24 hours. Take one or two frames and nail two pieces across inside parallel with the top-bar, and at distances of about 3 inches. Cut the comb into strips about ½ inch wide and shave off one side of the strips nearly down to the eggs or foundation. Dip the side shaved off in wax barely melted, and quickly fasten to the underside of the top bar and the two cross-pieces; take a small spoon and run some wax alongside of the strips so as to hold them still better. You now have frames with eggs not over 24 hours old, and the cells pointing downward. There is a charm and fascination to the bees in having the cells point down instead of being horizontal. It seems to conform to their idea of how eggs out of which queens are to be made should be placed. They illustrate this instinct in the fact that when they are filling a hive with comb they will build nice tender queen cells here and there in irregular and roomy places where they can conveniently point them down, though they have not the slightest swarming impulse at the time. After awhile when the impulse comes, the queen sharing it lays eggs in three cells, and the young queens are developed.

Having the frames with strips of eggs, go to a vigorous colony—one with enough bees and energy to be building comb, and occupying at least 1,400 cubic inches of space. Remove the queen and all combs having brood except two. The brood combs left should have unsealed brood and pollen, and as few eggs as possible, also let the combs left be black and tough. Place your frames with strips between the two brood combs, fill any vacant places with empty combs, close the hive, and you have conformed perfectly to the requirements of nature in your endeavor to produce the finest queens. The reason I leave the brood combs, is that I do not know but that bees use the young larvæ in making the royal jelly, and if they had only eggs the queens might be dwarfed on this account. Let me ask older bee-keepers, do bees use young larvæ in making royal jelly? There is little danger of the bees making queen cells in the two brood combs, the cells being horizontal and tough. Open the hive between the 2d and 3d days, and remove any larvæ in cells started in the brood combs. The bees will remove the royal jelly to the cells on the strips. By this method you will rear large, long queen cells, and plenty of them, in beautiful rows easily removed. With a sharp knife I cut underneath the cells close to the wood, taking a portion of wax that is very convenient to hold the cells when you put them between the frames in the nuclei to which you introduce them. You can remove the cells on the evening of the 11th and morning of 12th days. Say you put in eggs July 3d, remove the cells during the 13th and morning of the 14th. I believe by the above method as good queens can be reared as bees are capable of rearing, notwithstanding the wise conservatism of Mr. Doolittle, who insists that Dame Nature cannot be equalled in that particular branch, though he is very bold to improve upon and assist her in many other departments.

As to negroes being bee-keepers, I will say, according to my life-long observation they have no taste for bee-culture, though many are well situated to engage in it. They love honey as fondly as a bear, but seem to be wanting in the capacity for that intellectual exertion necessary to understand and practice advanced or true bee-culture. *Ex nihilo nihil fit.*

I forgot to say in connection with rearing queens, that I believe the dollar queen traffic has done great good. It is as easy to rear a fine queen as a poor one, and competition makes it to the interest of every queen-breeder to rear the best and satisfy his customers. What is the difference to me between a fine warranted dollar queen from Mr. Alley or Hayhurst, and a tested one? It is merely a difference of time, for they would be bound to make it good if the queen did not produce all three banded workers. Let the dollar queen traffic continue through the omnipresent U. S. Mail, and disseminate Italian and Cyprian blood wherever bees are kept. I am glad to see the Lone Star State has excelled any yield hitherto reported from a single hive. Evidence from all quarters shows that much can be done at bee-culture in the South by the application of intelligence to the industry.

Grenada, Miss.

* * *

Translated by A. Neighbour.

Winter Temperature Required by Bees.

DR. DZIERZON.

In the hot climate of Syria, Ethiopia, and Brazil bees do not suffer harm from the heat; and while in our country they keep perfectly well in a hot summer and mild autumn, they are supposed to perish during a cold winter from excessive heat. Who can comprehend these contradictions? In two cases only is this conceivable. First, if the whole atmosphere is heated to such a degree as almost to melt the wax, causing the combs to break, which is reported to be the case in the neighborhood of Aden in the Red Sea; and second, if a large colony get excited while the entrance is closed. In such an event the heat in a short space of time may become so great as to cause the combs to break. Many of the colonies sent to the exhibitions at Cologne, Erfurt, and Potsdam, with large population and abundant honey, but meeting with an accident on the way, arrived in this condition. I may also refer to the case of a bee-keeper who, in order to keep back a swarm which was on the point of issuing simultaneously with another swarm, quickly closed the entrance of the hive, and shortly after found the bees suffocated and the wax in a melting state.

But I deny that a colony of bees can be ruined or injured by excessive heat when the entrance is open, and I consider it to be quite impossible. For if the temperature in the hive should have been raised somewhat high, as it might be during a necessary removal of the hives, a portion of the bees rush out of the entrance as soon as open—a number of bees, which return immediately, and by setting up a terrific hum expel the excessively hot and foul air from the hive, which in a short time re-establishes quietness among the bees. But if quick fanning should prove of no avail, because the air that rushes into the hive is just as hot as the air which is driven out, the bees may be seen to hang out, which we frequently have an opportunity of observing on sultry days in the summer. In winter even we may happen to see bees hanging out if the colonies have a large population and are kept in rather a warm place. When my apiary, containing sixty colonies and many empty hives, was completely destroyed by fire in 1846, I had an opportunity of observing the behavior of the bees during the heat which human beings were unable to endure. The hotter it grew the larger the number of bees became which hung out, but otherwise they remained perfectly quiet until they were finally seized by the flames and consumed. Thus the bees know how to shift for themselves even during an unbearably great heat, as long as relief is possible. If, however, Dr. Krasicki wants to make us believe they suffer and perish from excess of heat in winter while the entrance of the hive is open, they would be the most stupid creatures on earth. Dr. Krasicki surely will not be able to plead that the cold does not permit the bees to move to the entrance of the hive to establish ventilation, as excess of heat and excess of cold, or the absence of heat, are contradictory terms, the one excluding the other.

But does not Dr. Krasicki produce arguments and evidence in favor of his peculiar opinion—that bees, like Polar bears, can stand cold better than heat; at least, better during repose in winter, and that they are more likely to perish from the latter than from the former? He certainly states his reasons, but they are such as you might expect to hear. They become valueless if examined closely. He relates how a colony in a log hive, the door of which had given away, survived extremely cold weather, and how another community existed for several years in a hollow tree with a large opening through which the bees entered. But what is there particularly remarkable in this, and what does it prove? I myself have had similar experience, of which I have given an account on various occasions. Let us consider the bees retired into the very centre of the structure of combs, the latter being covered with hoar frost, and the passages between the combs, so to speak, filled up with feathers, or we may consider the cluster of bees wrapped up as in in a feather bed. As long as the bees keep close to the honey they are able to brave the most severe cold, no matter whether the hive be closed or open. An open door or a good size entrance is a real advantage to bees, because the vital air (oxygen) cannot so easily become exhausted as when the door is tightly closed or when there is only a small entrance, closed, perhaps, with ice.

In the winter of 1845 I had an opportunity of noticing the appearance of the interior of hives after being exposed to extremely cold temperature for a considerable time. A truly Siberian winter continued without interruption from the beginning of February till Easter. I had many of my colonies in wooden boxes, and even those in heavy log hives taken into my warm room when the bees were on the point of perishing, in order to save as many as I could. But what a sight it was whenever I opened a hive!

In Germany, indeed, we can only desire such a mild temperature for our favorites, but we cannot create it. In the struggle for existence the bees will always have to battle against their greatest foe, the cold. It will remain our business to protect them against this enemy as much as we possibly can for the well-being of the bees and in our own interest, for the more honey is saved by the protection afforded the larger will be the quantity which we can harvest.

For the American Bee Journal.

Bee Department of the Tri-State Fair.

DR. A. B. MASON.

The following is the apiarian part of the Premium List of the Tri-State Fair Association, which holds a fair here (Toledo, O.) every fall. The fair begins Sept. 4th, and holds till the 16th. Entries can be made so that the exhibits can begin on the 4th, and they may be made till six o'clock p.m., Sept. 12th. There will be no charge for entries in this department:

PREMIUMS.

Comb honey in most marketable shape, not less than 20 lbs., 1st, $4; 2d, $2.

Extracted honey in most marketable shape, not less than 20 lbs., $4; $2.

Crate comb honey in most marketable shape, $4; $2.

Display comb honey in most marketable shape, product of one apiary during 1882, $5; $3.

Display extracted honey in most marketable shape, product of one apiary during 1882, $5; $3.

Display apiarian supplies, $5; $3.

Display bees wax, $2; $1.

Display, Italian, Cyprian, or Syrian queens, $3; $2.

Colony Italian, Cyprian or Syrian bees, including its public manipulation, $5; $3.

Apparatus for making comb foundation to include everything necessary for its manufacture, $8; $5.

Comb foundation, mill or press, $4; $2.

Honey extractor, $2; $1.

Bee hive for all purposes in the apiary, $2; $1.

Bee hive, glass or exhibition, $2; $1.

Honey vinegar not less than one gallon, $2; $1.

Best wax extractor, 1st prem., Weekly Bee Journal 1 year; 2d prem., *Gleanings in Bee Culture* 1 year.

Best winter and summer bee hive combined, 1st prem., Weekly Bee Journal 1 year; 2d prem., *Gleanings in Bee Culture* 1 year.

Best comb foundation for brood chamber not less than 5 lbs., 1st prem., Weekly Bee Journal 1 year; 2d prem., *Gleanings in Bee Culture* 1 year.

Best comb foundation for surplus honey, not less than 3 lbs., 1st prem., *Cook's Manual of the Apiary*; 2d prem., *Gleanings in Bee Culture* 1 year.

Best display of comb foundation, 1st prem., Weekly Bee Journal 1 year; 2d prem., *A. B. C. in Bee Culture.*

Best one piece section, not less than 50 sections, 1st prem., *Gleanings in Bee Culture* 1 year; 2d prem., *Bee-Keeper's Instructor.*

Best dovetailed section, not less than 50 sections, *Bees and Honey.*

Best packages for extracted honey with labels, *Bee Keeper's Instructor* 1 year.

Best bee smoker, *Bee Keeper's Instructor* 1 year.

Best honey knife, *Bees and Honey.*

Webster Thomas & Sons, Somerset, Ky., publishers of the *Bee Keeper's Instructor*, offer a pure tested Italian queen as a special premium for the best comb honey in the most marketable shape, not less than 20 pounds.

The Association offers a Traffic Department this year as an experiment, "the special object of which is to enable all who arrange an exhibit to introduce all meritorious products in their line into immediate and general consumption, not only making the week (or two weeks) one of sight-seeing and recreation, but profit to both exhibitor and visitor." The special features of the first week will be a competitive military drill, etc.

Any exhibitor having honey or apiarian supplies in any quantity to sell, "can for a reasonable rent, offer for direct sale on the grounds, all manufactured wares of merit, or take orders for future delivery, under such rules and regulations as will guarantee square dealing, and protect both buyer and seller."

I am not financially interested in the Fair Association, but am very anxious that the bee-keeping fraternity shall make a creditable exhibit, not only of articles entered for premiums, but also of every article used in our specialty, in large quantities for sale on the grounds. Let all who intend to exhibit, and those intending to enter the Traffic Department, make early application, so that ample room, etc., may be provided. From five to ten cents will take a person by street-cars, from any depot in the city to within a short distance of the fair grounds.

Every bee-keeper, but one, that I have consulted, is desirous of organizing a Tri-State Bee Keepers' Association during the fair, to hold its meetings annually during the fair, and it is suggested that the meeting for organizing be held on the fair grounds Wednesday afternoon, Sept. 13th, and then hold one or more sessions each day or evening during the week. We hope to induce the Editor of the American Bee Journal; the Editor of *Gleanings*; Prof. Cook and other well-known apiarists to be present and aid in organizing such an association, and give us lectures on our specialty during the fair, and we hope to make the occasion so interesting and profitable that bee-keepers will find it to their advantage to be present.

Reduced rates for passengers and freight have been secured on all railroads coming here; any information in regard to which, with rules and regulations, and entry blanks of the fair association will be furnished free on addressing the Secretary, John Farley, Toledo, O., or Dr. A. B. Mason, Wagon Works, Toledo, O.

I don't know who the Vice-President of the N. A. B. K. Society for Ohio is, and I hope I am not "treading on his toes," but it seems to me that so important a fair as the Tri-State ought not to be ignored.

I hope to get permission for such bee-keepers as may desire to bring tents and camp on the fair grounds thus reducing the expense of a one or two weeks' stay. I will answer any inquiries in regard to it as soon as decided by the association.

Wagon Works, O., July 27, 1882.

For the American Bee Journal.

That Professorship.

WM. F. CLARKE.

An old and not yet obsolete book says: "Blessed are the peacemakers." In accordance with its teachings, I like to harmonize disputants, especially when it can be done in so pleasant a way as to say, "You are both right." This, I think, is precisely the case with the controversy between the editor of the Bee Journal and Mr. Heddon, in regard to the proposed apicultural professorship. In my humble judgment, gentlemen, you are both right. To fill the office in question, a man is needed possessed of scientific attainments in entomology and botany sufficient to enable him to give ample instruction concerning the structure, physiology, and habits of the bee; also to inform his pupils fully as to the classification, uses and culture of the various plants that yield honey. A man is also needed to give practical teaching in bee manipulation. Without the latter, all will be theory, and mere theorists are always bunglers. The question is, can we get these two sets of qualifications combined in one professor? I doubt it. Prof. Cook is perhaps the nearest approach we have to this rare combination, and while he is unsurpassed, perhaps unrivalled, as an apiarian scientist, both he and his most sincere admirers will readily admit that there are those who can beat him hollow as a practical bee-keeper. This is no disparagement to him whatever, because eminence as a scientific professor, and distinction as a practical bee-keeper, are scarcely possible to one and the same individual. Each is business enough for any one man, and he wins glory enough who is truly great in either of these departments of study and labor.

To make a complete equipment for a school of apiculture, we need two professors, one of scientific and the other of practical apiculture. Then we will have a "full team." Except on this plan, it will be only a "one-horse concern." Mr. Heddon has well said, that the management of a large apiary conducted purely with an eye to business, is very different from the care of a few colonies of bees. He is also right in the opinion that in the future, bee-keeping will be largely in the hands of specialists. These will need special training. Some may think I magnify bee-keeping too much when I say that, like the professions of law and medicine, it needs not only the collegiate, but the working education. You cannot make a good lawyer merely by attendance on law classes. He must work in an office and do business in the courts. Nor can you make a good doctor by putting him through a course of medical study. He must walk the hospitals, and see practice. Neither can you make a good bee-keeper by mere attendance at college. He must spend a season or two with a first-class bee-keeper who is handling a large apiary.

The BEE JOURNAL has nominated a Scientific Professor, and though he is a stranger to me except by name, I take the JOURNAL'S word for it that he would be "the right man in the right place." Now, let me name the Practical Professor—James Heddon. If there is a better man for the post in the whole United States of America, all I can say is, I don't know him. When I was in Mr. Heddon's apiary, not long since, and found him giving his invaluable instructions to only two students, I could only wish he had *two hundred*, and that I was one of them.

Since writing the foregoing, I have come across the following extract from the *Examiner*, which is too excellent a clincher of what I have said to be omitted:

"Let it be understood, then, that the college does not undertake to turn out merchants, or journalists, or lawyers, or engineers. What it does undertake, and what it accomplishes when students make faithful use of their opportunities, is to prepare young men to become the best kind of merchants, journalists and engineers. The college-bred man has to learn his trade or profession like any other; but he will learn it quicker and better, and pursue his chosen calling with more success, than any man of equal ability and application who has been less thoroughly trained."

All of which is just as true in its application to the best kind of bee-keeping.

Listowel, Ont., July 29, 1882.

Translated from L'Apiculteur Alsacien-Lorrain.

Comb Foundation-Making in Germany.

DR. REISSER.

MY DEAR FRIEND:—This time a few lines concerning the manner in which comb foundations are made.

The machine used by our section of the Society in their manufacture was furnished by M. Herm. Greve, gunsmith at New Brandenburg, and cost 33 francs and 75 centimes ($6.28). It consists of two plates of zinc, in which the bases of worker cells are cut, and which, consequently, exactly fit when one is placed upon the other. These plates are fastened upon beechwood planks.

The following are the details of the process: Put the wax which is to be used, and which should be pure, into a tin vessel large enough so the zinc plates can be dipped in it and even moved about a little. This vessel is itself placed in a large kettle or boiler containing water kept at a temperature of 80° or 90° C. (176° or 194° F). When the wax is once liquefied, one of the plates is moistened with a solution of common soda and dipped into the wax-bath once or twice according to the thickness which it is desirable to give to the sheet, after which the plate with the adhering wax is immersed in cold water. The strips of wax which extend beyond the zinc-plate are trimmed off, and the sheet of wax is then gently detached and placed in a box between two layers of blotting-paper. The work continues thus until the wax is exhausted. Then one by one the sheets are taken out in order to be stamped on the side which is still smooth. The plates are moistened with soda, a sheet softened again by a momentary immersion in tepid water is placed between them, and they are then put under pressure. This sheet, when sufficiently pressed, is carefully loosened from the plate, passed through cold water to remove the coating of soda which it has, and then placed in the box as before; then the whole is weighed down by a smooth board and weight of some sort in order to secure evenness of surface.

Theoretically foundation-sheets thus made cost two-thirds less than those we buy, but in reality this proportion is incorrect. The following are the reasons:

1. The wood to which are attached the zinc-plates becomes warped, in consequence of the repeated washings, bending the metal with it, and thus in a short time the surfaces of the plates become irregular and the sheets of wax are pressed too much in some places, holes being even produced, while in other places they receive no pressure. The plates should be screwed to cast metal. Another imperfection is, that they have no handles. One can supply this deficiency by attaching a cord, or, better still, a bent screw, which must be removed when pressure is applied. This inconvenience, it is true, only occasions a loss of time.

2. Notwithstanding the soda-wash which is used, it is not always easy to detach the sheets of wax from the plates, and more than one breaks, whence comes the necessity of remelting. But each sheet put back into the melting-vessel conveys with it some soda, however little it may be, and after quite a number of broken sheets have been returned, the wax in the bath only gives those that break like glass and have an objectionable color. The quantity of soda is increased at each dipping of the plate itself.

3. The press required must be very strong. I defy the inventor of this method to succeed with a copying-press; it would not stand the test a half hour. Such an implement as is needed is not to be found in every house, nor even in every place. Furthermore, it is difficult to measure the pressure exerted; either it is insufficient and the bases of the cells are not shown, or it is excessive and the sheets are crushed.

4. Simple immersion in water does not remove all the soda. It would be necessary to leave the wax more than a week in the water-bath, and renew the water quite often. But the foundation would become very brittle, and a large number of the sheets would break with the least handling. I know only one way of cleansing them, that is to lay one sheet after another on a wash-board, take them to a fountain or to a stream, and, with a soft brush and an abundance of water to wash the sheets of wax until the water used no longer effervesces. Eight to ten minutes are indispensable for each sheet. It may be considered good fortune if a quarter of them are not broken by this process.

Lievre, Germany.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Aug. 10—Maine State, at Harmony, Maine.
Wm. Hoyt, Sec.

Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.

Oct. 3-6—North American, at Cincinnati, O.
Dr. Ehrick Parmly, Sec., New York City.

5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

The National Convention.

The following is the official call of the Secretary, Dr. Parmly, for the Convention of the North American Bee-Keepers' Society. We hope there will be a large attendance:

The North American Bee-Keepers' Society will hold their 13th annual meeting at Washington Park Hall, Cincinnati, O., across Washington Park from the Exposition building. Time, Oct. 3rd to 5th, 1882. First session Tuesday, 10 a. m., Oct. 3. We are encouraged to hope that this will be a very profitable meeting, as we are promised papers from, and the presence of, a large number of our most prominent bee-keepers both in the United States and Canada, and essays and implements of the apiary are expected from abroad to add to the knowledge imparted by the research and inventive skill and methods of our countrymen.

EHRICK PARMLY, *Sec.*

New York, July 12, 1882.

☞ The bee-keepers of Boone Co., Indiana, are invited to meet in Lebanon, at Barton Higgins' office, over Jaskson's bee hive, on the west side of the square, to organize an auxiliary County Association, on Aug. 10, 1882.

GEORGE J. FREY, }
ORA KNOWLTON, } *Executive Com.*
JAS. H. OREAR, }

Read before the Am. Inst. Farmers' Club.

Bee-Keeping and Other Pursuits.

T. SHERMAN.

In traveling this, the rural districts of New England, at the present day, one is painfully impressed with the melancholy contrast to the New England of our father's time.

Then, jolly, thriving farmers, well-cared for farms, smiling fields and peace and plenty, greeted the eye on every hand. Prosperity and happy united families was the rule everywhere; now, these are the exceptions. Families are, very generally, broken up; the daughters are in the factories, and the sons have emigrated to the west, carrying with them the snap and grit of the typical Yankee. Even now, the sturdy boys are, by the hundreds, leaving the old crib and seeking new homes beyond the "Father of Waters." In hundreds of instances that have come under the observation of your—perhaps cynical—essayists, while tramping with knapsack and staff, farm houses have been seen in the crazy-looking condition, so graphically depicted on the blackboard by our accomplished fellow husbandman, Dr. Gerrish. Farms have gone to waste and are tenanted mainly by the idle and shiftless, or by those who are as worn out as the farms themselves, and a general air of discouragement and despondency too prevails.

The experienced tiller of the soil who presided over the *Tribune* has been under the sod for many years; but his counsels to the young man to "go west" are still impressed on the minds of Yankee lads, and the papers of yesterday tell us that over three hundred have already gone this spring from the little State of Vermont to Dakota.

And so this sad state of affairs among the down East peasantry becomes yearly more and more pronounced, and but for her ten thousand factories New England might in time again become the howling wilderness that our progenitors found it.

The agriculturist of the West, from his prolific virgin soil, on his stoneless prairie, is munificently rewarded for his labors—labors, too, far lighter than his forefathers knew of. He finds his profit in growing wheat and corn, in raising cattle and sheep, in the dairy products of butter and cheese, and in many other industrial pursuits, which bountiful nature supplies him with the soil and climatic conditions favorable for. But what is the man in the East to do now on his comparatively sterile lands? With him, what with a cold, flinty, untillable soil, unpitying climate, and unlovable conditions generally, it requires severe toil and a grinding frugality that amounts to a cruel deprivation of the essentials for health and comfort to make both ends meet. He is oftimes forced to subsist on what the storekeepers won't take of him—sour bread, measly pork, the ubiquitous unbaked dough pie (flavored with dibb), the inevitable doughnut, and other equally fructifying edibles.

Such a life and such a fare belittles the man, and as his prosperity often depends upon the potato yield, discussion upon that esculent is the one topic dearest to his heart, and the æsthetic tastes of his hard-working wife can find no higher expression than in the pretentious sunflower and the ungraceful hollyhock.

No wonder, then, that the country is like poor Ireland, full of absentees. No wonder, either, that the bitter problem is present, "Is life worth the living," under such heart-chilling conditions?

Is it surprising that the young fellow solves the problem with a "no?" With tears in his eyes, but resolution in his heart, his other shirt tied up in a handkerchief, the traditional 50 cents and a few doughnuts in his pockets, the revised New Testament in his bosom, and the dear old mother's blessing on his head, he trudges off and helps to build up the Empire of the West.

But we propose, to-day, to speak on the affirmative of this question, and to try to show that "hope may yet spring eternal in the breast" of the stay-at-home New England farmer, and that he may even there become again not merely happy and prosperous, but perchance a bloated capitalist.

Having the facts, figures, results, and experiences to demonstrate the truth of the statement, we unhesitatingly assert that,

1st. Dairy Farming can be and is made to pay handsomely. Our worthy President and our honored associate Dr. Trimble, gladly testified to what they saw on the Starr Ranch, at Litchfield, and there are other dairy farms showing equally good results, some perhaps better, why not hundreds of them? Need we send to Iowa for our butter, when Maine, with her bleak and merciless atmosphere, carries off the prizes at our agricultural fairs?

2d. The production of poultry—ay, smile if you will—can, with proper management, let us emphasize the words—proper management—be made largely remunerative, and will draw a line under the word largely.

3d. Pisciculture, where one has the location for it, will we are assured by the Hon. Mr. Roosevelt, rapidly roll in the shekels, and make plethoric the money bags of the farmer. Trout-raising, at any rate, we will subscribe to, from a very limited personal experience.

4th. Arboriculture will always pay; but, of course, here the question of time is an important factor; yet we may say, neglect not to set out trees, for they grow while we sleep, and are ever things of beauty and utility.

5th. Fruit trees, as a specialty, we cannot too strongly urge upon you, for with intelligent care and nursing they will reward you with golden fruit. The saturnine idea of our worthy and well-meaning but distressingly narrow-minded Puritan progenitors we have happily grown out of. They, dear, good souls, taught that through the apple, in the days of old, came "original sin;" and through the apple of latter days comes the cider mill, and from the cider mill to the gin mill the transition is an easy one. So our good uncle, for once with a fanaticism commendable for its honest self-sacrifice, cut down his orchard.

6th. Viniculture has not received the attention it deserves, and probably—we may say probably—on account of the same grim Puritan rigidity in regard to wine drinking.

We would remark—*en passant*—that the most luscious grapes it has ever been our good fortune to meet with on this continent, were presented to our enraptured gaze and our pampered palate, in Canada (on the Vermont line), and the most glorious orchard of apples, pears and plums we found near Brattleboro, Vt., and all these both vines and trees, had been in bearing for years. Why not profit by such rich experiences? Why not export 1,000 barrels of apples where we now send one?

Then, too, we have been told from this platform, in language positive, if not strictly classical—that silk culture can be successfully carried on in New England, but upon that point our opinion is a little shaky.

We insist upon it, however, that the other industrial pursuits herein mentioned, whilst being refining and elevating to a degree, may also be made remunerative beyond the dreams of advice.

Relinquish then the unequal contest between the plow and the rocks, the hoe and the potato bug, and let your "Jerseys" and your "shorthorns" regale themselves in sweet fields and pastures green, and they will do their part to enrich your tables and your coffers, bring a wealth of bloom into the cheeks of the bonnie little folks, and help keep your boys prosperous and contented at home. But don't forget the fruit trees.

All this, however, falls short of our purpose, which was, and is, to direct attention mainly to another and still more lovable industry, and so our thesis is: The apiary, or bee culture, as a source of profit to the New England farmer.

Why the New England man in particular? Because that part of the country was the original habitat of the bee, as it was the home of the kind of trees and flowers which seem to have been made for its special delectation, and whose sweets it takes the most particular delight in ravishing.

Our beloved friend, Dr. Trimble, has so thrilled and delighted us with his exquisite delineations of insect life and habits, that it seems rude temerity to venture into his special field of investigation; but, from our heart of hearts, we love our dear little dumb friends, the bees, who so faithfully play their part in the divine economy.

Excuse us if we do not go into any wild æthestic craze over the doctor's fantastic measuring worms and his hairy caterpiller, but for us the honey bee sufficiently "fills the bill."

As amateurs in entomology, we have found infinite pleasure in the study of other humble creatures of the insect world, but chiefest of all commend us to the little winged elf that goes about doing so much good, that not only aids to fructify the blossom, but "gathers honey all the day from every opening flower."

It, of all God's beautiful creation, most and best justifies its existence, patiently and untiring working for prosperity, and content with a bare subsistence for itself.

With it, it is ever work and worship. The merry little thing tells it all in its cheery hum. Does it need a vivid imagination to find in its pleasant buzz a doxology? An anthem of gratitude, welling ever from a surcharged heart, for the gift of life and joyous sunshine? If you think it does, then you have not, as we have, enjoyed an intimate friendship with the happy fellow. Its brief life is a sermon (and we know what a good sermon is, for have we not been fortunate enough several times to hear our friend and brother farmer, the Rev. Mr. Lightbourn). Yes, the bee's life is a good practical sermon, and its creed should find ready acceptance in every well balanced mind.

In it we find the realization of our ideal communist. Is it not so. Mr. Sharp? for its efforts are always for the good of the whole phalanstery and for generations to come after. Its own life is ephemeral, but six weeks at the most, while engaged in active business life; six weeks of cheerful toil and its work is ended; but its "children may well rise up and call it blessed."

Let us for a few moments contemplate its model home. What does it reveal? Contentment, order, immaculate cleanliness, brotherly love, and industry; no dissipation, no staying out o' nights. Bah! we leave this wretch to the enjoyment of his own billious captiousness.

But true it is that the lady of the house, albeit a lady of high degree, is an exemplary wife and mother. A short bridal tour; this, of course, is the correct thing, *en regel*, and then a return to the home of her youth to receive the congratulations of her numerous, admiring friends; no cards, no cake, no refection but plain bee bread, with honey syrup and an unanimous pæan of rejoicing. Ever after, this ever to be praised royal matron remains at home and attends to the family, with whom (and with society in general) she is ever kind, gentle and amiable, wisely or unwisely, preferring, however, not to have any other ladies in the house.

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To Bee-Keepers in Florida.

To assist in making out my report to the National Society, I would consider it a great favor if bee-keepers all over the State of Florida would write down what the general character of the season has been and its effect on the bees of their neighborhood, the results of his own and his neighbors' labor in their apiaries since last September, and anything else worthy of note connected with the industry, and send the reports to me by Oct. 15th, as the National Convention commences Nov. 3rd, and my report must be in Cincinnati by that time. Every thing promises well in this section for an unusually large crop of late honey to come in November and December, that can not, of course, be included in the reports. Would be glad, however, to have the prospect for a late crop included in reports.

W. S. Hart, *V. P. for Florida.*

New Smyrna, Fla., July 28, 1882.

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☞The bee-keepers of Boone Co., Ind., are cordially invited to meet at the office of Barton Higgins, Lebanon, Aug. 10, for the purpose of organizing an auxiliary county bee-keepers' society, by request of committee.

SELECTIONS FROM OUR LETTER BOX

Fall Transferring.—Please inform me through the Bee Journal, if it will be prudent to transfer bees from old box hives to movable frame hives during the month of August. If you recommend the transfer, please give all the information necessary to insure success. A. D. Darby.

Baton Rouge, S. C.

[If you are certain of honey flow sufficient, after the transfer is made, for the bees to gather winter stores, then you had better transfer at once. You will find all the necessary information in the Bee Journal of July 12th, page 437. We have on several occasions practiced a similar method with great satisfaction.—Ed.]

Hybrid Bees.—I am a mere novice in the bee business. I commenced last spring with 13 colonies, 2 of which were in a starving condition when spring opened; 5 of those colonies were in movable comb hives and 8 were in old log and box hives. I have increased by artificial swarming to 37, and lost 7 or 8 swarms which came out during my absence. I now have them all in movable comb hives, and have taken from them 586 lbs of beautiful comb honey in section boxes, and have used no comb foundation. All black bees, except one colony of Italians, which I got to experiment on. They are all in excellent condition, and are storing honey very fast. I am congratulating myself on my success as a novice, but, doubtless, I owe a great deal of it to the reading of the Bee Journal. I have found several puzzles, one of which I will mention. I sent for an Italian queen in May last, and introduced her in June. I thought her to be the only Italian queen within 100 miles of here, as I had never seen nor heard of any nearer than that to this place. The queen, I suppose, was injured in transit, as she was a long time unfruitful after her arrival, but finally, commenced laying, and has been gradually improving since, but the mystery is, since her introduction I have found scattering Italian bees in several other hives, and several swarms have been captured, which were mixed with Italian bees, and in every instance that has come under my observation, there were pure Italian bees and pure black bees, and some which appeared to be mixed. Now, will you please give me some light in explaining how this mixture comes? I also inclose a small piece of a vine which is very abundant here in the bottoms, and blooms nearly all summer. I wish to know its name and rank as a honey plant.

B. L. Clements.

Queen City, Tex., Aug. 1, 1882.

[Drones from your Italian queen have met the young queens from your black colonies, and those of others. thus accounting for some being apparently Italian, some black, and others mixed.

The vine is called tie-vine, and is an excellent honey-producer.—Ed.]

Bees in Arkansas.—The past winter was very favorable with us for breeding. We have had no frost since the last of February. Our honey season opened about March 1. Swarming began the 25th, and they are swarming yet. It is of no use to clip the queen's wings, clipped or not they will swarm, and half of them abscond. Our honey resources are maple, willow, red bud, wild plum, peach, apple, poplar, honey locust, sweet gum, blackberry, persimmon, and sumac in abundance. Did you ever hear of bees gathering honey from poison ivy? I think my bees are, as they cluster upon it very thickly. There are quantities of other honey plants, too numerous to mention, in which our bees find sweet nectar. I have 80 colonies in Langstroth hives, and 60 in box hives. I have extracted 3 and 4 times from the upper stories, and taken surplus as often from the box hives. I never lost a colony in wintering, except by starvation, or dysentery.

Frank Thiaville.

Forest City, Ark., July 18, 1882.

[Poison ivy (*rhus toxicodendron*) furnishes an abundance of pollen and some honey.—Ed.]

Bees in Colorado.—In a late copy of the Bee Journal I see an article on fugitive swarms in California. In 1879 there were only a very few bees in this county or State, and none known to be in the forest. Now, July, 1882, there are bees to be found everywhere in the town and on the farms, also every suitable tree in the forests seems to be pre-empted. I know of at least 30 colonies taken from trees and off of bushes where they clustered after swarming, during this and the past season, and many swarms are seen in the air moving to new locations. Bees winter well out-doors without protection, and as the mountains are covered with flowers from May 1st till frost, there seems no lack of honey. Our most experienced bee-keeper, Dr. W. D. King, of Boulder City, kept bees in the mountains near our present location for a couple of years, and one colony made for him 400 lbs. extracted honey in one season, and I notice just now that honey comes in so fast that the queens are crowded for room to deposit eggs. Does not this look like Colorado is destined to be a great bee country?

PHIL. REARDEN.

Jamestown, Col., July 28, 1882.

Beautiful Foundation.—By this mail I send sample of foundation that I, and many others, are using with good satisfaction. I will operate a mill at the coming National Convention, if Mr. Heddon will meet me there with his press.

J. VANDERVORT.

Laceyville, Pa.

[The sample received is intended for surplus boxes, measuring 41 inches long by 4 wide, and weighs just 1½ ounces—or, nearly 15 square feet per pound. It would be an interesting feature in the National Convention, if a competitive exhibition of the practical workings of several of the approved foundation machines could be arranged.—ED.]

Journeyings in America.—After leaving Chicago on my way from Scotland to Texas, I visited Mr. Chas. Dadant's apiary at Hamilton, Ill. For every lover of the industrious little insect, such an apiary as Mr. Dadant's holds great attractions. I inspected the various departments, saw them make comb foundation, introduce queens, and in fact the whole routine of progressive American bee-keeping. I have met one bee-keeper in America who has not impressed me favorably, and he was, as we would say in Scotland, "warloch" looking. But Mr. Dadant was the soul of hospitality, and my sojourn at his home will be remembered as one of the bright spots in my trip. I begin to realize more fully that kee-keeping is not mere child's play, and that with many years of experience, there are avenues brimming with knowledge yet unexplored.

JAS. ANDERSON.

Quincy, Ill., July 30, 1882.

Real Encouraging.—In my report of a month ago, I gave you a very discouraging account of our honey prospects for this season, but you replied with words of encouragment that seem now about to be realized. Our skies brightened some two weeks ago, and after a few days of dry weather our bees commenced again to work on both red and white clover, and to-day, in comparison with the past, they are a regular tornado. Sections that have been on the hives for six weeks in a half completed condition are being finished up and new ones started in a way that is real encouraging. I would be glad to have you see, smell and taste some of the small amount of honey that our bees have managed to gather during our long, wet weather. It would test the skill of an apothecary to get up anything to beat it. It seems to be a compound of everything that is bad in the way of honey, and to a taste that has been educated by using our nice white clover honey, it is simply disgusting.

JOHN C. PEDEN.

Lawrenceburg, Ky., July 26, 1882.

Returning Swarms.—Last year I bought an Italian queen and introduced her into a black colony. This spring I took the colony about a mile out into the country. I divided them June 10th. The old queen was great on the increase, so I divided again June 26th, to keep them from swarming. I paid but little attention to them until word was sent me that my nice Italian swarmed July 21st. I went out the next day to examine the hive, and found no queen, but the hive had 20 queen cells in it, three of them capped. I left them until the next day and examined again, but found no queen. I cut out all the cells but one, and moved the hive so that a hive with a queen cell stood where the old queen had swarmed from; just a week from the day that my bees swarmed, the family heard a great roaring among the bees; they said the yard was full of them, but did not swarm as they supposed they would. I examined the hive where stood the old hive, and sure enough, there was my old queen back again, and settled down to business. She had destroyed the queen cell, and had part of a comb filled with eggs. I should like to know whether this is a common occurrence or not? I supposed that when bees swarmed, they went to stay. I know but little about handling bees. What I have learned has been from "Bee Culture" and the BEE JOURNAL. This is my first year's effort, and I have 20 colonies doing well.

NATHAN M. WOODMAN.

Bushnell, Ill.

[We frequently hear of swarms being hived and deserting their new quarters after two or three days, sometimes returning to the parent hive, but oftener to parts unknown. We do not know why they might not become dissatisfied after the lapse of a week and return, especially with a dearth in honey flow, and a new hive and population on the old stand.—ED.]

Making up for Lost Time.—We have had the worst season for bees I ever saw up to July 20th, when basswood blossoms commenced to open, accompanied with honey weather, and the bees work as though they meant to make up for lost time. I expect to hear that Mr. Doolittle's starving bees have stored basswood honey by the ton the past week. King-birds *do* catch worker bees, and don't you forget it. I have seen them take the bees right from the basswood blossoms every day this week. Powder and shot are the best remedy. I am using Given and Vandervort foundation in 5x6 sections. As an experiment, I filled several cases with sections filled with each kind of foundation, and in every case, the bees drew out the Given and stored it with honey before they commenced on the Vandervort. This was a surprise to me, for the Vandervort was so handsome to look at I thought the bees would go for it as soon, if not before, the Given. I find alsike clover and southern thornless raspberry profitable to raise for bees.

GEO. T. WHEELER.

Mexico, N. Y., July 29, 1882.

The Honey Wave.—After waiting and feeding so long, the honey wave struck us July 10th, and I never saw such a heavy yield as from that time until the 27th. It is mostly from linden, though some from red and white clover. I hived a swarm of Cyprians on the 15th in a 2 story Langstroth hive, with 20 frames of foundation. In 8 days I took 40 lbs of honey from the upper story, and the lower one was full. It is said that second swarms are led off by virgin queens. Do they mate while swarming, or after?

WM. MALONE.

Oakley, Iowa, July 27, 1882.

[We have tested the matter to our satisfaction that they mate afterward. In cases of this kind we have found that more or less of drones are harbored by the new swarm for four or five days, after which they are given the cold shoulder and unceremoniously ejected.—ED.]

Progressive Transferring.—Please let me say to Mr. Hutchinson that in my method of transferring I keep the old queen occupied, to a great deal better extent, than he does in the transferred combs. I lose the interest on the use of the 8 sheets of foundation 25 days, till I can make up the old hive. I gain many times that amount in the extra room I give my queen. He has but one queen at work by his methods, why should I be required to have two? I never noticed any loss by any loafing, but if Mr. H. does on testing this method, he can easily drive them into the new hive every 2 or 3 days, as fast as they hatch out. Try this method, Mr. Hutchinson, and you will never go back to sticks, wires or strings, and patched combs. It is the neatest, safest, surest and most profitable method I ever tried out of very many.

JAMES HEDDON.

Dowagiac, Mich.

Introducing Queens.—The new use of the smoker for introducing queens, as suggested by Mr. Jones, on page 410 of the BEE JOURNAL for 1881, has been more valuable to me than the subscription price of the JOURNAL. I have tried it, and can introduce queens with perfect satisfaction.

WM. ROBERTS.

Vaughansville, O., July 29, 1882.

Dysenteried Nuclei.—Do you suppose that mule thought the bees were eating honey after he had kicked over the hive? I will give $10 for a queen whose working progeny all fill themselves with honey when badly disturbed, and do not sting when filled. What a pleasure to handle such bees, even if they did get some honey away from the extractor.

E. B. SOUTHWICK.
Mendon, Mich.

Mr. Southwick thinks the cause of my bees having dysentery was their refusing to take food. The dysentery was caused in less than 24 hours, and the bees took food to excess. In my statement on page 444 of the BEE JOURNAL, it should read 4th where it reads 7th. I have since observed another case of dysentery in a 2-frame nucleus in a neighbor bee-keeper's apiary, and if the particulars in these cases will be of any value, I will give them if desired; also the observance of the mating of a queen, and some facts concerning drones.

Bryant, Ill. S. A. SHUCK.

[We would be pleased to have Mr. Shuck, and all others, give all facts that may come within their knowledge which have a bearing upon important questions constantly coming up for discussion, and especially those relating to vital matters, such as dysentery in bees, mating of queens, and peculiarities of drones.—ED.]

Progressive Transferring.—Had Mr. Heddon's article on transferring, and the one on width of sections, been written in May, I should have been at least $8 better off to-day. I have 15 colonies in the Heddon hive, and you can judge of the value to me of the article on progressive transferring. I send you a wire presser for fastening foundation in frames. Please give it a trial, using No. 30 wire, and report. I shall get no surplus honey this year. Basswood not yet in bloom, but will come out in a few days.

F. M. CHENEY.
South Sutton, N. H., July 29, 1882.

[The wire-presser consists of a brad-awl handle, in which is inserted a No. 2 sewing needle to about ⅔ its length, somewhat slanting, the head is then ground off to leave about ⅔ of the eye. We have had no opportunity to test it, but doubt not it will do its work satisfactorily.—ED.]

Which Queen Goes?—When a swarm issues, which queen goes, the old or a young one? I commenced a year ago last spring with 3 colonies, divided once around, and had 2 swarms. One colony died before winter set in; and this spring I lost one by starvation. I now have 10 good colonies. I have learned some by experience, and more through the BEE JOURNAL. My bees are mostly hybrids. Z. G. COOLEY.
Norwalk, Iowa.

[The old queen always goes with the swarm.—ED.]

Bees Doing no Good.—We have an abundance of white clover, but bees are not working on it. Basswood was only one week in bloom. If the fall flowers do not furnish more nectar, I will have to feed my bees to bring them through the winter, for we will have a severe one. Catnip and motherwort are the only plants bees are working on now. No surplus in this part of the State.

JOHN STURWOLD.
Haymond, Ind., July 28, 1882.

[It is seldom we wish any man mistaken, but we hope your prediction of a severe winter will prove you a false prophet.—ED.]

Breeding Up.—I have 12 June and July swarms in old box hives. Some of them are in fair condition considering the time they have been hived, but the majority are quite weak, and will not live through without feeding—what is best to be done with them? Please answer through the BEE JOURNAL. MARK THOMSON.
Canton, O., July 28, 1882.

[If honey is not coming in sufficiently fast to keep up rapid breeding, better feed a little each day, and trust to fall flowers for winter stores. Should they fail, then will be time to feed for winter.—ED.]

Honey from Daisies.—Do bees gather honey or pollen from the common white daisy, and if so, is it injurious to them for winter stores? They have worked on daisies some in this section this season. I never knew them to work on it before. Some bee-men think that it will kill the bees to winter on it. JOHN H. GREEN.
Maine, N. Y.

[We never knew bees to work on daisies, but suppose if they do so it is for the honey; and do not imagine it will be injurious. They winter on honey from the mountain laurel, which is quite poisonous to humanity.—ED.]

Maple Sugar.—Please inform me through the Weekly BEE JOURNAL if bees can be wintered on pure maple-sugar? W. B. BROWN.
Lebanon, N. H.

[We would be afraid to attempt it, except as an experiment.—ED.]

Prospects Brighter.—Basswood is now in full bloom, and the past three days have been splendid for the bees, the mercury standing at 90° in the shade at noon, and 70° at 5 a.m., which is favorable for the secretion of nectar. The combs which showed nearly starvation for the bees a few days ago, are now glistening with honey, and enough has been already stored for a winter's supply by the majority of my colonies, while a few have commenced work in the boxes. A small surplus may yet be in store for we New Yorkers if the weather continues favorable. My dish is right side up at least, and I hope for the best. I am thankful for the winter supply already obtained.

G. M. DOOLITTLE.
Borodino, N. Y., July 29, 1882.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance.

Special Notices, 50 cents per line.

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For **4** weeks..................**10** per cent. discount.
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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

Examine the **Date** following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Emerson Binders.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

☞ When you meet with an accident, get a sprained ankle, or otherwise injured, don't go to the expense of sending for a doctor, but apply Kendall's Spavin Cure, and you will experience instant relief. 32w4t

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., August 7, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for honey is quiet. Extracted brings 7@10c. on arrival. No comb honey on the market worth mentioning, prices nominal.

BEESWAX—Scarce, and brings 20@25c. on arrival. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey is light, prices being made to meet views of purchaser.

BEESWAX—Scarce, and in demand at 23@25c.

R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—White clover, fancy, 1 lb. bxs., 15@16c.; white clover, good to choice, 1 and 2 lb. bxs., 13@14c; buckwheat, 2 lb. bxs., per lb., 11@12c. Extracted and strained, white, 9@10c; dark 7@8c.

BEESWAX—The demand for beeswax has been rather moderate, and though small lots are held about the same, large lots would have to be shaded. Western, pure, 27@28c.; Southern pure, 28@29c.

D. W. QUINBY, 105 Park Place

CLEVELAND.

HONEY—White comb honey, in 1 lb. sections, continues to meet with ready sale at 25c. as fast as received. No 2 lb. sections received as yet. A small lot of extracted has been received, but none sold, therefore cannot give quotations. BEESWAX—25@28c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—The general impression is that Kern and Tulare furnish rather poor honey. As a rule, the honey heretofore received from that quarter has not been of extra quality, but as an exception we note the receipt of some comb from Lemoore, Tulare county, which for whiteness and general excellence would be hard to beat in any part of the State. Some comb of superior quality from Los Angeles, raised by A. W. Hale, is commanding in small lots 20c. The same price was paid for last year's yield. The honey is perfection itself. Dark comb, no better than "C," sold this week at 12c.

We quote white comb, 17@18c.; dark to good, 8@13c. Extracted, choice to extra white, 9@9½c.; dark and candied, 7@7½c. BEESWAX—28@30c.

STEARNS & SMITH, 423 Front Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—Selling fairly at 18@20c. per lb. for comb, 7@8c. for strained, and 10@12c. for extracted—top figures for choice well handled only. Sale 20 bbls. strained at 8c. BEESWAX—Sharply higher, under a scant supply and brisk demand. Prime at 25c. early, to 27@28c. later.

R. C. GREER & CO., 117 N. Main Street.

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

HENRY ALLEY,
WENHAM, MASS.

I see by Sept. No. of *Gleanings*, Mr. O. E. Coon wishes to know where he can procure Italian queens that will produce yellow drones. Mr. Conn can get queens from Henry Alley, Wenham, Mass., that will produce *yellow drones* and yellow bees with three bands; no two-banded bees among them, and the worker bees *are* workers, as good as the best. They are very docile (can be handled without bee-veil), and are very hardy. I have had Italian queens from Mr. Alley since 1878, and have never known a queen to produce a dark-colored drone, and the worker bees need not be put on a window to show their three bands. They will show them when empty. C. J. ALDEN, Oakdale, Wis., Sept. 7, 1881.

The queen I had of you is a jewel; $10 would not buy her. They are the best honey-gatherers I have. FRED. LEWIS, Camden, Maine.

I have bought queens of you for 10 years; you have always given me the best workers as well as the brightest stock. DR. MCKAY DOUGAL, Seneca, Mo., July, 1882.

Your bees stand No. 1 here, JNO. T. NEWTON, West Richfield, O., July 15, 1882.

Warranted Queens, $1.25; the largest, brightest and most perfect selected, $1.50 each; Tested, $2 each. No money required until the Queen is received.

Only Cyprian, Italian and Holy Land Queens for sale. **21st Annual Circular** sent on application. Queens by return mail in most cases.

32w1t **HENRY ALLEY,** Wenham, Mass.

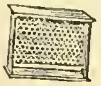
AT LULING, TEXAS.

I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.

14w39t **J. S. TADLOCK.**

FLAT - BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **25c.** per pound, delivered here, Cash on arrival. Shipments solicted.

To avoid mistakes, the name of the shipper should always be on each package.

ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL

PRIZE QUEENS FOR 1882.

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book.

☞ For sale at the BEE JOURNAL Office. ☜

65 *ENGRAVINGS.*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

$777 A YEAR and expenses to agents, outfit free, address **P O Vickery Augusta, Maine.** 36w1y

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1w1y **D. S. GIVEN & C.,** Hoopeston, Ill.

FREE! FREE!

Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.

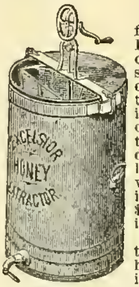
11w6m E. A. THOMAS & CO., Coleraine, Mass.

DUNHAM COMB FOUNDATION—40c. per pound; extra thin and bright, 10 sq. ft. to the lb. 48c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13w1y

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

EXCELSIOR

HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13	inches	.........$8 00
For 2 Langstroth "	10x18	"	.... 8 00
For 3 " "	10x18	"	.........10 00
For 4 " "	10x18	"	.........14 00
For 2 frames of any size,	13x20	"	.........12 00
For 3 " "	12½x20	"	.........12 00
For 4 " "	13x20	"	.........16 00

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

HONEY

For the past few years I have made this excellent food my leading article. Having the best established reputation in this city as a dealer in PURE HONEY direct from the Apiaries, enables me to obtain the highest market prices. Your consignments and correspondence respectfully solicited.

R. A. BURNETT, Commission Merchant,
Successor to Conner, Burnett & Co.,
28w13t 161 So. Water Street, Chicago, Ill.

100 Colonies

FOR SALE. ALSO,

TESTED AND DOLLAR QUEENS
AND
BEES BY THE POUND.

Send address for prices.

1w35t **JAMES HEDDON,** Dowagiac, Mich.

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

—"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2

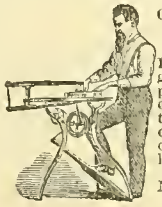
Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1w1y.

BARNES' PATENT

Foot Power Machinery



CIRCULAR AND
SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

925 W. Madison Street, Chicago, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

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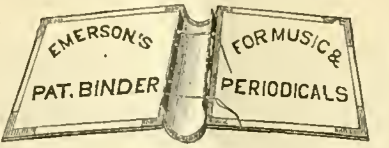

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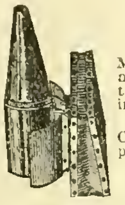

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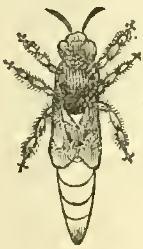

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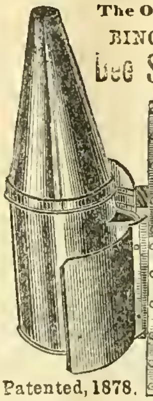
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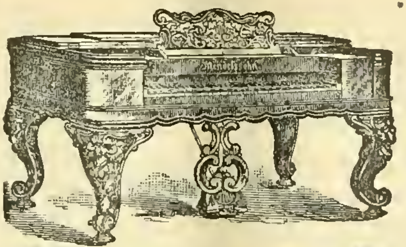

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items 513, 514
A Disturbance in Cyprus 513
Death of Jesse C. Estlack 513
The "Gap" in the Honey Season 514
The Labors of the Drones 515

Convention Notes—

Local Convention Directory 515
National Convention 515

Among Our Exchanges—

The Honey Yield, and Taxing Bees 516
Adulterations 516
Syrian Bees 516
Handling Bees 516
The Length of Life of Worker Bees 516

Correspondence—

That Long, Long Day with Mr. Clarke 517
Sending Queens by Mail to Canada 517
Notes on Honey Plants 517
How I Extract Honey from Combs 518
Cultivation of Simpson Honey Plant 518
The Honey Harvest 519
The Common Sense Bee Hive 519
Increase of Colonies 519
The Utility of Untested Queens 520
Dunham vs. Given Foundation 520
How to Exhibit at the Fair 521
The National Convention 521

Selections from Our Letter Box—

Foul Brood 522
Customs Duties 522
Good Season in Utah 522
A Honey Plant 522
Width of Sections 522
All Swarms and No Honey 522
Cleaning Wax Extractors 523
My Report to Date 523
Apis Mellifica 523
Sweet Clover the Only Hope 523
Dividing and Introducing 523
Fertile Worker 523
Ground is Baked Like a Brick 523
Mr. Shuck's Problem 523
Juneau County, Wis 523
Entomological 524
Golden Dollars vs. Golden Bands 524
Whose Loss is it? 524
My Honey Crop 524
Honey Enough to Winter On 524
Iron Lugs for Hanging Brood Frames 524
Afraid of Robbing 524
A Good Season 524
A Fair Yield Anticipated 524

A Disturbance in Cyprus.

We learn by a dispatch dated at Larnaca, Cyprus, Aug. 10, that a great anti-Christian demonstration has occurred. At the funeral of a Moslem who was found murdered, and whose death was attributed to the Christians, the outbreak occurred. The police are in full sympathy with the mob, and all is in a state of anarchy. A score of Christians were arrested, one was killed, and many fled to the mountains for safety. At the time of this writing (Aug. 11) further disturbances are feared. The brevity of the dispatch may give rise to apprehensions all over the world for the safety of Mr. Frank Benton and wife, who are residents of Larnaca, and from whence their correspondence has heretofore been dated. We think all fears for his safety are needless, because Mr. Benton is a man who is most likely to ingratiate himself in the favor of any community in which he may reside, and in Cyprus, as in fact in all countries of the Old World, Americans are in great favor. With the business and higher classes, they have become especially popular on account of their intelligence and energy; and with the lower classes, on account of their liberal views and peculiar form of government at home. Europeans, especially those of Eastern Europe, have a marked preference for the American people and the United States government, regarding them as the true exponents of national freedom. Any mishap to Mr. Benton might well be considered a national calamity, and would be regretted by the bee-keepers of the whole world, who cannot but recognize his self-sacrificing labors in attempting to introduce *Apis dorsata* to the public. We think there is no reason for apprehension.

◆

Death of Jesse C. Estlack.—Mr. I. N. Whitely, writes us from Denver, Col., of the death of Jesse C. Estlack, which occurred at Littleton, Col., Aug. 5, 1882. Mr. Whitely says:

> Mr. Estlack was born in New Jersey, Dec. 6, 1818, and removed to Colorado in 1859. He was an energetic and enterprising farmer and bee-keeper, and through industry and economy has accumulated a large property. He leaves a wife and family to mourn the loss of a kind husband and father, and the community the loss of a worthy citizen.

◆

☞We have received from Mr. James Heddon, Dowagiac, Mich., one of his queens which produces the "long, leather-colored, docile workers," sent here to be tested upon her comparative merits. The workers accompanying her were fine, large, well-developed bees, and though not as yellow as some Italians we have, nor as "frisky" as our Syrians, yet they are perfect beauties. The queen is a fine specimen of regality, and when released from her introductory prison, marched down among her Syrian subjects with a royal, dignified movement that seemed to command the respect and devotion she undoubtedly deserves. We expect to render no disparaging report concerning her progeny.

☞ We regret to learn that on the night of Aug. 5th, the residence of Mayor W. J. Andrews, ex-President N. A. B. K. Society, at Columbia, Tenn., with contents, and several colonies of bees, were destroyed by fire. Loss over $5,000, on which there was an insurance of only $2,500.

The "Gap" in the Honey Season.

> O, for forty acres of sweet clover (melilot) now, to fill up the gap between basswood and the autumn flowers that come in August and September. The acre we have tells the true story of what we ought to have.—JAMES HEDDON.

> If it was not for the sweet clover, bees would be idle. Still, they keep up their hum of rejoicing from sunrise until dusk, bringing load after load of transparent nectar, that God, in his all-wise providence, causes to be secreted in the bloom of melilot or sweet clover.—H. W. GARRETT.

We give in this number two communications of especial interest to bee-keepers, either of which will be worth many times the subscription price of the BEE JOURNAL to any apiarist who will profit by the information contained in them. One is by Dr. G. L. Tinker, with "Notes on honey plants," page 517; the other by J. G. Steer, subject, "Cultivation of Simpson honey plant (figwort)," page 518. Both are highly practicable, and come at a time to allow of the fullest preparation to profit by them.

In this connection it may be well to remark this season has been a peculiar one, and just now is the time when the "gap" is occurring between basswood bloom and fall honey flowers. In a few localities, particularly Dr. Tinker's, this gap is not so noticeable. but, as a rule, there is a serious break in the natural bloom which is quite damaging to the fullest possibility of a honey yield. Fortunately for us, we are in the vicinity of an abundant sweet clover pasturage, which not only supplements the white clover harvest, but curtails it by reason of enticing the bees from it before the nectar has ceased to flow, and even renders basswood scarcely desirable. Wherever sweet clover prevails this season, we anticipate there will be no cessation in the honey yield till closed by the advent of winter. With even a moderate amount of it, bees will still keep up their breeding as vigorously as ever, and be in the strongest condition to take advantage of the more plentiful fields of buckwheat, goldenrods, asters, heartsease, Spanishneedle, bergamot, etc.

We introduce this article with two extracts from this paper. The first, written by James Heddon, gives evidence of a deep sense of duty, and a carefully formed opinion, which will carry conviction to thousands of readers who have been deliberating and waiting for some just such practical authority as Mr. Heddon to endorse the feasibility of planting for honey, and to suggest what to plant; and thousands will adopt his excellent hint, and in the future thank him for his earnest expression. Mr. Heddon we think will. with the assistance of his initial acre of sweet clover, have a very satisfactory season's report to make at its close, especially should the weather be favorable for gathering from the late flowers.

The second extract is from a letter by Mr. H. W. Garrett, in New York. His is an expression of gratitude for bounties which are within the reach of all, with the expenditure of a little time and less money. His report comes from a State which has been peculiarly unfortunate in its realization of a good honey crop. He does not tell us whether his sweet clover was planted especially with a view to the yield of honey or whether it is a semi-spontaneous yield, being a survival and self-seeding from former cultivation for other purposes.

We feel grateful to Dr. Tinker for demonstrating the value of his golden honey plant, and especially for the information that it properly and seasonably sown, it will grow and bloom the same season sown. In this, and perhaps this only, it is superior to sweet clover, for many apiarists are too impatient or thoughtless to put in a crop, even with the assurance of large profits, where they have to await the second season before realizing from it, because their profits have heretofore been large and their returns speedy. With honey-producing as a specialty, however, the methods formerly prevailing will all, or nearly all, be changed; and in nothing will the change be so radical as in bee pasturage. To make of bee-keeping a specialty, it will be necessary to provide against the probability of crop failures, and in no way can this be done except by providing a certain and continuous honey flow. It is gratifying to know, that through the efforts and persuasions of the BEE JOURNAL, there are hundreds of shrewd, discriminating, intelligent apiarists in America at the present time experimenting with honey-producing flowers, and observing the effects of climate and soil not only on foreign plants, but also on those indigenous to our own country, and the next ten years may see as substantial improvement in this direction, as the past ten have witnessed in quality and appearance of product. Not until there are four months of continuous flow will bee-keepers be satisfied, and this we believe to be as possible as a continuous season of life-sustaining vegetables. No bee-keeper is worthy to be styled *an apiarist*, who cannot in the not far distant future point to his cherished bee-pasture, and reckon with some degree of certainty on his season's yield.

Henry Alley, reports from Massachusetts as follows, dated Aug. 9:

> For 17 days in succession my thermometer has been up to 90° in the shade, and on several days it indicated 99° and 100°. About everything in the shape of vegetation was dried up. Last night distant thunder showers brought us some rain, and all is changed this morning. Goldenrod is coming into bloom, and I look for plenty of fall flowers for my bees to feed on.

Last season we experienced a protracted drought here, but the sweet clover never failed us, and this season, although wet and cold weather has prevailed, the bees can recognize no "gap" in the honey flow, but are working merrily when the sunshine allows them to do so.

☞Just a year ago this week, a small bee paper was started in New England and for 3 months it was issued weekly—struggling for an existence. It was then suspended, with the promise that after a rest of 2 months it would resume as a monthly. A few were inveigled into subscribing for it for 1882, but only one number has been published this year—and that not until April or May. It is therefore safe to conclude it "dead," and this will serve as its "obituary notice." It leaves a few subscribers who have been swindled out of the money advanced for subscription, and sundry debtors "mourn" because of misplaced confidence in trusting the publisher. Being one of the "mourners," last mentioned, we "speak that we do know."

☞We notice an advertisement in the *Empire State Agriculturist* which should please even the most ardent *cheap* queen advocate—offering to "sell" a "beautiful untested Italian queen for fifteen cents!" If *cheapness* in queens is all that is desired, every one should now be happy! Wonderful bargains! Prodigious economy!! Only 15 cents for a "beautiful Italian queen"!!!

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

The Labors of the Drones.

Prof. B. Silliman, editor of the "American Journal of Science and Arts," published at New Haven, Conn., has sent us an old manuscript, written by the Rev. Elisha D. Andrews, Armada, Macomb Co., Mich., Oct. 7, 1851, giving the latter gentleman's views on several important points in bee-culture.

Prof. Silliman remarks that he found the old manuscript among his late father's papers, where it had been for many years. He desired us to look it over, and if anything of interest was discovered to print it in the interest of scientific bee-culture.

The Rev. Elisha D. Andrews states, in the manuscript, that the object of his writing it was to subject his "discoveries to a strict, scientific scrutiny and criticism." He then adds: "If they will bear this test, I am disposed to have them given to the world, as some little addition to the accumulating science of the age."

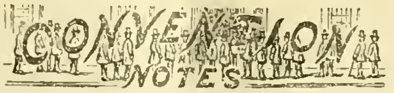
One part, in particular, is interesting to us at the present time, and that is in relation to the character and object of the drone bee. He says:

They are considered, as it respects the labor of the hive, an idle and useless race—only a nuisance as their name proverbially denotes. Now, this I consider a perfect slander. From 30 years' observation I can testify that there are no bees in the hive that pursue their work with so much ardor and zeal as the drones. It is true, they do not make their appearance abroad till the warm weather in May and June, and not in the early morning nor late in the afternoon, nor at any time when the weather is cold and damp, but they are never seen idly basking about the entrance of the hive, and in the middle of the day, when the weather is hot, they come out of the hive in great numbers and in great haste, rushing through and over the worker bees that lie idle about the entrance of the hive. There are no bees in the hive that seem to show such earnestness in their work as these poor slandered drones, but it may be asked, what are they about, that they are not earlier at work, and why do they retire before the other bees cease labor? Have we any right to suppose that they have no office to perform, and are quite idle while in the hive? They are such zealous workers when abroad, that I am inclined to be charitable, and believe they are employed in some work of benevolence when out of sight. Why may we not suppose that they are nurses of the young bee in the larval and chrysalis state, employed to brood over them and keep them warm, when the weather is at too low a temperature for their comfort and growth, and to feed and nourish them as they need, and whenever the temperature of the weather rises to the necessary point, these nurses go forth in search of such food as the young demand? The zeal with which they labor seems very much like the promptings of parental or maternal affection.

☞ The Amerian Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

Paid orders are filed in the Treasurer's office, and always accessible for reference, and the remitter gets a receipt for money sent.

For safety, when sending money to this office, all should get either a post office or express money order.



Local Convention Directory.

1882. *Time and Place of Meeting.*

Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.

Oct. 3-6—North American, at Cincinnati, O.
Dr. Ehrick Parmly, Sec., New York City.

5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.

Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

The National Convention.

The following is the official call of the Secretary, Dr. Parmly, for the Convention of the North American Bee-Keepers' Society. We hope there will be a large attendance:

The North American Bee-Keepers' Society will hold their 13th annual meeting at Washington Park Hall, Cincinnati, O., across Washington Park from the Exposition building. Time, Oct. 3rd to 5th, 1882. First session Tuesday, 10 a. m., Oct. 3. We are encouraged to hope that this will be a very profitable meeting, as we are promised papers from, and the presence of, a large number of our most prominent bee-keepers both in the United States and Canada, and essays and implements of the apiary are expected from abroad to add to the knowledge imparted by the research and inventive skill and methods of our countrymen.

EHRICK PARMLY, *Sec.*
New York, July 12, 1882.

☞ The summer meeting of the Mahoning Valley Bee-Keepers' will take place at Berlin Center, Ohio, on Saturday, Aug. 19, 1882, at 10 a. m. All interested in bee-keeping are invited to attend. Turn out. Do not forget your wife, daughter, son and lunch basket. We expect a happy and profitable time.

L. CARSON, *Pres.*
M. HAUGHN, *Sec'y.*

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., August 14, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for honey is quiet. Extracted brings 7@10c. on arrival. No comb honey on the market worth mentioning, prices nominal.

BEESWAX—Scarce, and brings 20@25c. on arrival.

C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The crop of 1882 is beginning to come forward, and so far very nice goods have been offered. Sales range at 18@20c. per lb.; one pound sections selling at the highest range, when well filled and white. Extracted, few offerings and demand light at 8@9c.

BEESWAX—25c. for prime yellow; dark 18@22c.

R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—White clover, fancy, 1 lb. bxs., 15@16c.; white clover, good to choice, 1 and 2 lb. bxs., 13@14c; buckwheat, 2 lb. bxs., per lb., 11@12c. Extracted and strained, white, 9@10c; dark 7@8c.

BEESWAX—The market is quiet and the tone a shade weaker. Western, pure, 26@27c.; Southern pure, 27@28c.

D. W. QUINBY, 105 Park Place

CLEVELAND.

HONEY—The market is quite active with us; it is beginning to come forward more liberally, and the demand is more fully met. For two days past we have not been able to sell for over 22c. per lb. for best white 1 lb. sections; of 2 lb. sections none have been received. Extracted we hold at 14c. for small packages, but have not made any sales.

BEESWAX—25@28c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—The market is firm for extracted and choice comb. Offerings and demand are light.

We quote white comb, 17@18c.; dark to good, 8@13c. Extracted, choice to extra white, 9@9½c.; dark and candied, 7@7½c. BEESWAX—28@30c.

STEARNS & SMITH, 423 Front Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—A fair movement in strained at 7½@8.—one lot of 25 bbls. reported sold at 8c. Some new comb (choice white clover offered), but little sold—held at 18@20c. per lb.; extracted quiet at 9@10c.

BEESWAX—Easier at 26@27c. for prime.

R. C. GREER & CO., 117 N. Main Street.

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

The Honey Yield, and Taxing Bees in California.—The *Semi-Tropic California* for August contains the following items:

The honey yield this season throughout California will be far from encouraging to our bee-men. These off years that are so frequent might be largely averted by turning more attention to growing certain trees and plants for bee forage.

The Supervisors sitting as a Board of Equalization for the County of Los Angeles, refused to lower the valuation as made by the County Assessor on the bees of the county, though some of the owners of bees in the county offer to sell all the bees they have at one-half the assessed value for this year. They are assessed at $3 per hive.

Adulteration.—The *Bee-Keepers' Exchange*, for August, has a very strong article on the above subject, from the pen of J. K. Douglass, Neosho, Wis. It is certainly worthy of note that bee-keepers, especially, are unanimous in their condemnation of the frauds which prevail to so great an extent in adulterating honey, as well as other articles of food. We give the last paragraph of the article alluded to, which is as follows:

On page 308 of *Gleanings* for 1882, the editor expresses a hope that the price of honey will be so low this season that more than usual will be consumed, and on page 296 he tells of one way to cheapen its production. I will quote the suggestion for the benefit of those who may not have seen it: "Pretty soon, and the wax of the world will be gone. What shall we do? I will tell you if you won't be scared. For brood combs use wires and go back to our old paraffine experiments of years ago. Had we only put wires into the frames as we do now, we should have succeeded without trouble. For comb honey we can use a mixture of wax and paraffine that the bees will work out much faster than pure wax; and for our small 4¼ sections, I think we can manage so that sagging will do no harm." So it seems that the honest producer of comb honey may have to compete with adulteration and fraud; for, of course, no honest man would think of selling comb honey built on adulterated foundation, for pure goods and any attempt to sell it for anything else would only result in failure. When I read the above extract I never thought of being scared, but I made up my mind that considering the frequent exhortations to honesty indulged in by it, that consistency is not one of the jewels that adorns that much mentioned type writer. Any one who will adulterate food is both to be feared and despised—feared for the consequence of his nefarious practices and despised for harboring the motives that prompt their commission. It is possible that my views on the subject of adulteration are too radical for this progressive age, but I think one who adulterates food products, merits a much greater punishment than does the utterer of counterfeit money, as the value of health is greater than riches.

Syrian Bees.—Mr. E. R. Root, in the *Canadian Farmer*, sums up the character of the Syrian or Holy Land bees as follows:

In summing up a few of the good features of the Holy Lands, we find, from the above facts, first, they raise a great abundance of cells at one rearing; secondly, the cells are started so that they hatch at or nearly the one time; lastly, if the cells are not too much disturbed, the queen will hatch out strong and healthy.

Now, a word in regard to the Holy-Lands as honey gatherers: My experience has led me to think they are equally as good as the Italians, and some say a little superior. Being originally reared in a hot, dry country, they have necessarily been obliged to gather honey at every opportunity available, or the race could never have existed. In this country, they of course manifest the same energetic disposition; and hence, as far as my observation goes, gather some honey after the basswood flows, even when the other bees are apparently inactive.

After what has been said I would not have it understood that I have any the less regard for the Italians than before; but, on the contrary, all things considered, I think they possess many qualities far superior to other races of bees, and will probably always retain the front rank.

My object in writing this is not to give the Holy Lands undue praise, to the exclusion of the Italians, but to bring forth a few of the good qualities which are justly their due. I do not deny that the Holy Lands have a few bad features; but these, I think, have been fully discussed before.

Handling Bees.—The *Indiana Farmer* gives the following on handling bees:

Many people are deterred from the keeping of bees by the dread of being stung, and many who have bees run them on the let-alone plan, simply because they do not understand the first principles by which they are governed. Only a few days since, a gentleman visited our yard, who owns a good many colonies, looking for, as he expressed it, some plan for their management with the least possible chance of coming in contact with their "business end." His dread of being stung was so great that we could hardly induce him to come within ten feet of a colony. After we had removed the cloth, lifted out and replaced the frames in several without any signs of being stung, he began to think it was not such a terrible feat after all. Gentleness is the first and most important feature, as regards handling them. Quick, active motions and sudden jars will anger them very much at almost any time. We many times work in the yard all day long without having to resort to smoke to quiet them, still we would not recommend this plan to amateurs, as it requires considerable familiarity with their "business end" to be able to stand without flinching, when by accident of some kind, some half dozen resent your interference. It is not much trouble to start the smoker so as to have it handy in emergencies of this kind. In opening hives, avoid all sudden jars, remove the cloth by turning it back, commencing at one corner or end. If the bees show anger, blow a little smoke on them to drive them down out of the way, and you will soon become so familiar with their temperament as to know just how much they will need of this kind of treatment.

The Length of Life of Worker Bees.—A correspondent in an exchange gives the following on this subject:

I thought I would satisfy myself in regard to the life of the bee in the height of the working season. I had a colony of the little black bees, and on the morning of May 3d I killed the queen, and by carefully looking through their hive I found one black drone and destroyed that in the evening of the same day. I put in a cell for a yellow queen on the 2d of June. She was hatched out and there were a few yellow bees in the hive on the 30th, just 21 days from the time the eggs were deposited. On the 7th of July a few yellow bees were to be seen playing around the hive, and on the 13th of July, just 14 days from the time the yellow bees were hatched out, a few were seen at work with the black bees. Now any one can see that if the yellow bees hatched in 21 days the last black bees were all out by the 30th of June, and if the yellow bees went to work on the 12th of July, the last of the black bees must have gone to work on the 4th of July, making 14 days from the time they were hatched, unless one will go to work sooner than the other. This colony contained nothing but black bees, when the black queen was destroyed; on the 18th of July just 49 days from the time the black queen was destroyed, there was not a black bee to be seen about the hive. I opened it, and not one was to be seen inside. I know that the bees will live longer at other seasons of the year, and I thought this would be a good chance to test in the height of the working season. The hive was examined every day during the whole time, so that no mistake might be made. From the above it will be seen that the lifetime of a honey bee, in the busiest working season, is but four weeks or 28 days.

CORRESPONDENCE

For the American Bee Journal.

That Long, Long Day with Mr. Clarke.

JAMES HEDDON.

I always read the correspondence department of the BEE JOURNAL with great care. The first column, while not always containing the best matter, seldom or never contains anything but first class. The same we know is true of any column under the name of Wm. F. Clarke. When I see this name and this column both together, and my name thrown in for the subject, I am terribly interested. Then, when I come to a place I "must not read," I cannot read it quick enough, of course.

I am very glad to have been able to deport myself in such a manner as to win the esteem of a man of his ability, and feel compelled to thank him for his eulogistic words. I only regret that I fall so short of the ability he gives me credit for.

Regarding our religious controversy which he touched upon with so much feeling, I sought to be as honest with him upon that subject as upon the topic of apiculture, or as I would be in the discharge of a pecuniary obligation. If I am indebted to you I will not deny it; if I am asked how to successfully winter bees every time, I will frankly say, "I do not know how;" if you ask me, "what of another life, where we may extend our pleasant controversies?" I must be honest and say, I do not know. If I have not had evidence that was sufficient to ground any belief either way in my mind, I must be honest and say so. If there is another life, and I find I was in that regard mistaken, I will not have to add dishonesty to my error. Whether there is or is not, it is so by a law in nature, and your opinion or mine will not change it. I have no doubt but that the honest will be as well fitted to enter such an existence as any one, and while here our whole attention and energies are needed in this one, as long as we are so surrounded with mistakes and crime. Right here, while upon this partially out-of-place subject, allow me to say that Mr. Clarke is an exemplary Christian minister, for while he recognizes in others opinions that differ from his own, even upon religious subjects, he fully respects and esteems the honest holder of such opinions. Belonging to the class who teach "Love your enemies," he does not hate his friends, nor those who have not in any way maltreated him. Mr. Clarke has a broad and generous feeling, and, as is usually the case, *his* Creator is equally broad and generous. These facts make Mr. Clarke a friend to those who honestly differ with him.

But, as ex-editor of the AMERICAN BEE JOURNAL, experimental apiculturist, and correspondent to all the bee papers, I need not say one word in praise of Mr. Clarke's lively vigor as a contributor. His contributions are those we seize first of all, as the hungry child seizes the cake-plate first at the table. As I have often said, I look upon Mr. Clarke as our poetical contributor—the man whose pen portrays in pictures.

I must confess that I have never before been "looked over" by one who so closely scanned every detail of the apiary. I was not a little surprised at Mr. Clarke's accurate descriptions, and how few the errors made in detailing the same, even to his correct guess that in observing the new-born colony settle down in their new home, I recognized the fulfillment of natural law.

I was glad of the opportunity to convince so candid and intelligent an apiarist as Mr. Clarke, that our crosses between the dark Italians and brown German bees were as gentle as any bees he ever saw; also that they brought in the nectar in a manner excelled by none.

I wish Mr. Clarke, and many other apicultural celebrities, could have been here to see the "long, leather-colored, brown German bees" bring in, the basswood honey. They had some reason to be cross when Mr. Clarke was here, though they were not. Basswood is now closed for 1882, and now is the finest opportunity to see these crossed (though not cross) bees dart for the large heads of red clover. O, for 40 acres of sweet clover (melilot) now, to fill up the gap between basswood and the autumn flowers that come in August and September. The acre we have tells us the true story of what we ought to have.

Long will I remember the long day's visit with Mr. Clarke, and the different opinion I formed of the reverend gentleman from that I had formerly held.

Dowagiac, Mich., July 29, 1882.

* * *

For the American Bee Journal.

Sending Queens by Mail to Canada.

S. CORNEIL.

According to our revenue laws, animals imported for improvement of stock are admitted free of duty, but all parcels sent by mail are stamped at the Custom House at the international line (called the outport), directing the postmaster not to deliver the parcels till they are examined by the Collector of Customs as to duty. W. W. Cary & Son recently sent a batch of queens to a Mr. Webster in this county. No doubt they reached his postoffice safely, but the postmaster was obliged to send them to the Custom House at Lindsay for examination, where they remained till they died. If I mistake not, this was the second shipment to the same party lost in the same way, making altogether a loss to Messrs. Cary & Son, of nearly $20, besides the loss and disappointment to Mr. Webster.

It seems the officials at some of the outports acting on their own better judgment, permit parcels containing queens to pass through the mails without being stamped for examination, because queens have been repeatedly received here without being so stamped, and have been delivered by the postmaster directly to the consignees. Possibly the packages of queens sent out by A. I. Root may more readily show their contents than those sent out by the Messrs. Cary, which might account for their different treatment at the outports.

If the packages were marked thus, "Bees for Improvement of Stock," probably they would be allowed to pass through without further trouble. A safer way would be for the importer to order his queens to be sent to the postoffice where the nearest Custom House is situated, but bee-keepers are not always posted as to the regulations of Her Majesty's Customs.

If other shippers have sustained loss in this way, it might be well to report the fact to the Hon. L. Wallbridge, Bellville, Ont., who, as President of the Ontario Bee-Keepers Association, would, I am sure, most willingly represent the matter to the Minister of Customs, and ask him to instruct the officers at the outports to allow queens to pass through the mails without being stamped for examination as to duty.

Lindsay, Ont., Aug. 7, 1882.

* * *

For the American Bee Journal.

Notes on Honey Plants.

DR. G. L. TINKER.

The first flowers on the golden honey plant appeared July 29th, but it will not reach full bloom before the middle of August. The plants grown from the seeds sown last fall are nearly ready to bloom, but the flower buds on that sown the first of April have not yet appeared, although the plants are nearly as large. The tallest are about 5 feet, so that it seems the plant does not reach its full height the first year. The growth along the river from old roots is now (Aug. 1st) from 5 to 9 feet high; that from the seed being only 2 or 3 feet.

The best time to sow the seed is in the fall or late winter, before the ground ceases to freeze. Only a small portion of the seed sown in May or June will germinate. A quantity of seed was sown on the 2nd of June, 16 days after a few plants came up, which will bloom about Sept. 1st. The seed planted about the 1st of April came up in about a week, not one apparently failing to grow. The plants from seed sent to me by Mr. E. M. Coombs, of Indiana, prove to be identical with those growing here.

I have growing in my garden several kinds of honey plants, the most of them new, including six new kinds, the seed of which I received last fall through the kindness of Mr. J. S. Wood, the Vice-President of the Danish Bee Association. Four out of the six are varieties of the *Scrophularia*, vis: *S. vernalis*, *S. lateriflora*, *S. chrysantha*, and *S. lanciniata*. The two latter have already blossoms. Both secrete nectar freely, but the last is a small plant with procumbent stems, and difficult to cultivate. The *S. chrysantha* is a vigorous plant, growing about 3 feet high, with a great profusion of flowers, which are a little larger than those of our indigenous figwort. It blooms from the 1st of July to the middle of August. The bees work on it with great relish, it being the first to be visited in the morning, and the last to be abandoned at night. I have counted 12 bees at work upon one plant at a time, about seven being the average number to a plant at work all day. One could well imagine what a roar of buzzing bees on an acre of this plant would make. It may be difficult to propagate, on account of the smallness of the seed. I will carefully test it and report again.

The *S. vernalis* is a large, easily propagated plant, and promises to be a decided acquisition. Its large green pubescent leaves now spread out over the ground a space of two feet for each plant, with a prospect of many flower stems. It is perennial, and will not bloom until another year.

The best method of propagating these plants, which will include the figwort or Simpson honey plant, is to prepare ridges in the fall of the year about 3 inches above the level of the soil, or high enough to shed water, and four feet apart. The seed should be sown in February or March, or before hard freezing weather ceases in late winter. Taking advantage of a thaw, when a drill a half inch deep should be scratched on the ridges and the seed thinly sown and covered. The plants appear later than ordinary weeds, are very small at first, and require care to cultivate, keeping all weeds down. After they are two inches high, they may be thinned out to a foot apart, or they may be transplanted readily by taking the soil with the roots.

From a comparison of many kinds of honey plants, I am led to believe that the most reliable and valuable have tubular flowers. The clovers, golden honey plant, motherwort, catnip, horsemint, teasel, sourwood, button-bush, boneset, goldenrod, the asters, and the several varieties of the *scrophularia*, of which figwort is one, have all tubular flowers, which prevents speedy evaporation of nectar. On the contrary, there are few really good honey plants having open flowers. Among these the basswood and tulip tree stand first. In the former the nectar is secreted in the cup-shaped divisions of the calyx, which, with the protection of the corolla and stamens, hinders evaporation. The flowers of the tulip tree secrete a large amount of nectar, but, as it is greatly exposed, there is reason to believe that much of it is wasted.

The most open flower that I have seen is that of the spider plant, but it does not secrete a particle of nectar after 8 o'clock a.m., or if it does, it is all lost by evaporation. The flower opens about 5 p.m., and secretes nectar very rapidly. The bees then begin work, but darkness soon overtakes them. By morning a large drop can be seen in every flower, which if not taken by the bees soon disappears. Only about 4 hours of the day are available to the bees to work on this plant. Although the drop of nectar is large, a very much larger quantity is secreted in the capacious flowers of the *Scrophularia chrysantha* and figwort, which form nectar continually night and day, but most freely when the sun shines.

The cleome, which is related to the spider plant, is a fair honey plant, the nectar being protected by a little bract upon the upper side of the stamens; but it is available to flies, ants, bugs, and bees almost without number. No other flower except the basswood is so pestered by all kinds of insects.

The mustards, including rape, the milkweeds, mignonette and buckwheat have all open flowers, and it is indisputable that this class of plants most often fails to supply nectar in any great amount. The most reliable honey plant, therefore, the one best calculated by nature for the honey bee is supplied with tubular flowers or with a corolla the divisions of which approximate in the form of a tube, as in the flowers of the white and sweet clover and locust, although the flower of the red clover is a perfect tube nearly one half inch long on the average.

The cultivation of annual honey plants, unless for some purpose other than their nectar, will scarcely pay the cost of yearly cultivation. But a good perennial can be made to pay a reasonable percentage on the value of the land to the bee-keeper. The perennial plants of this class that can be especially commended, are the motherwort, catnip, golden honey plant, and figwort. The three former being readily propagated, and able to contest the ground with any kind of weeds. The figwort, however, if well cared for the first season will hold its own afterwards. The most vigorous of all is the golden honey plant, the only trouble with it being that it takes a strong team and a good plow to turn a field of it under, when a crop of corn will eradicate it.

New Philadelphia, O.

For the American Bee Journal.

How I Extract Honey from Combs.

EUGENE SECOR.

I do not follow bee-keeping as a sole business, and am not trying to run a large apiary. I have only 19 colonies at present. I keep bees for the pleasure I find in pursuing the study, as well as for the profit there is in it; though for several years past I have made them pay a large interest on the investment. I am running some for comb honey, in sections, and the remainder for extracted honey, in two story hives. I keep a complete record of each colony, and by the method I pursue it is very easy to do so. On the top of each hive I keep a card with a memorandum of everything which is of interest.

When I wish to extract I take an empty hive, remove the cap of the hive from which I wish to extract (which is flat on top), and put the empty hive on it, raise the honey board (which is the old-fashioned style, made of inch lumber), smoke the bees to drive as many as possible down into the brood-chamber, take out the frames of honey one by one, brushing off the bees with a bunch of asparagus tops, and place them in the empty hive. When this is done, I carry the honey into the cellar and put the hive on the scales, which are near the extractor, balance them, extract, and return the empty frames to the hive, balance again, and I learn the weight of the honey from that colony with but little trouble.

In a large apiary it might not be practicable to carry the honey into a building to extract, but I find it satisfactory, as it never excites robbers, and everything, except the honey I am getting, is stationary.

My extractor is a home-made affair, of my own design and manufacture, and although it has been in use for five or six years, it still works like a charm. I took the half of a molasses barrel, made a reel large enough to accommodate two frames, and got the motion by two horizontal wheels, one on the standard of the reel and the other fastened to the outside of the tub and connected by a band of twisted cord. The wheels are made of inch lumber slightly grooved, and one twice the diameter of the other. A peg in the large one answers for a crank. To keep the band from slipping, I wind it with smaller cord. The whole thing did not cost a dollar beside the "head-work."

Forest City, Iowa.

For the American Bee Journal.

Cultivation of Simpson Honey Plant.

J. G. STEER.

I see in the last number of the Bee Journal a call for information on the cultivation of the Simpson honey plant. I beg leave to give a few notes through the columns of your excellent paper on the subject. My experience with it extends only through this season and last. I procured the seed and sowed in a bed of wood-earth very late—about the first of June. They came up poorly, but I got 200 set out, which blossomed in September and October, until after we had 2 or 3 severe frosts. Last spring they were the first living green to be seen. I took up the roots, some of which would not go in a half bushel, and divided them with a knife into as many sections as there were crowns started, sometimes as many as eight or ten. These I planted singly in rows 2 or 2½ feet high.

The idea is abroad that the Simpson honey plant is hard to propagate; I have not found it so. They need shade, and not too much water, as they will rot if too thick in the bed. The way I practice is this: If you have a small corner of timber land not too dense, clear it up and trim the trees up quite high, dig and level the ground and sow the seed thinly, and cover very lightly; reset them when 2 or three inches high, in rows 2 feet apart, and one foot in the row. If it is not seasonable, water and shade them at first by means of a board laid on bricks over them. This all seems like a great deal of trouble, but after you get a start you can propagate more easily from the roots as above directed. Carefully save all your seed, and scatter it in all waste places, especially among trees if the shade be not too dense. Enough will grow and ripen—seed that will fall and come up thickly the next year, when you can set the plants out or let them grow where they are; when once started, they will care for themselves. I have briefly told you my plan of cultivation, or rather, propagation, for it will need no cultivation after the first year.

I will speak briefly of its qualities: It is a weed, but not pernicious. It began blooming here the first week in July, and for profusion of bloom I never saw anything like it. I have seen hundreds of bees on it, when not one was to be seen on the clover. It secretes honey constantly in wet or dry weather, and in such abundance that I have shaken it from the flower in drops. The rain does not affect it, as the flower hangs down, which is not the case with the spider plant. I have even found bees on it when it was raining too hard to be out-doors. In short, I consider it the very best honey plant grown, and do not mean to stop short of 10 acres of it. I shall not sow it on valuable ground, but think it will well pay to clear and trim up an acre of timber land each spring, and sow it, and, besides, it helps the appearance of things. I hope to hear from others on the subject of planting for honey, especially figwort.

For the American Bee Journal.

The Honey Harvest.

W. S. HART.

To help the editor to form an opinion of this year's crop of the United States, as soon as possible, I will say we had the poorest spring for bees within the memory of the oldest inhabitants, as a long continued drouth prevented all swarming, and in many cases so reduced the honey in the hives that feeding was necessary. In May, however, the dry spell "let up," and since then the bees have been doing well. Old ocean itself must lower several feet before our mangrove feels the effect of dry weather. Bees have been swarming for some weeks past, and I for one have lost quite a number of rousing swarms that would have largely increased my honey report, if retained. It is a new experience with me to have them come out and go to the woods, but my assistant was called away by the sickness of his wife, and I was left at the busy season without skilled help, and three small orange groves to see to besides my bees. I have, however, from 65 colonies on May 1st, taken about 6,800 lbs of honey, and expect to make it over 11,000 by the 10th of August. There is, probably, 2,500 lbs now in the hives ready for extracting. My neighbors' bees are doing splendidly, but I understand that away from where the mangrove grows, they have not done as well. The cabbage palmetto is now in bloom, so that the bees of the interior that have not already had a good harvest will have a chance to make a paying crop yet.

New Smyrna, Fla., July 28, 1882.

For the American Bee Journal.

The Common Sense Bee Hive.

G. W. DEMAREE.

Mr. Warran Clayton, a gentleman formerly residing at this place, but now a resident of Georgetown, Scott County, Ky., being on a visit to his mother, who lives near neighbor to us, has just handed me the enclosed circular. He informs me that a certain party is working up this "patent hive" in Scott County, and that the people are going "wild over it." I regret to see this delusion on the part of so intelligent a people as I know the people of Scott County to be. Kentucky is destined to be one of the great honey-producing States. Her medium climate, neither too cold nor too hot, her rapid conversion into a great stock-breeding and grazing State, her mountains, rivers, creeks and brooks, her wonderful virgin forests covering her mountains and hills, and skirting her rivers and streams, abundantly justify the prediction.

The working up of delusive "patent hives" is not to the best interest of bee culture. The exaggerations indulged in by the venders of "common sense" or rather "common nonsense" hives, is sure to result in disappointment and disgust on the part of those who for the want of information suffer themselves to be imposed upon by designing sharps. The BEE JOURNAL is the acknowledged exponent of American Apiculture, hence its opinions coming from the pen of its widely known Editor, is of more weight than if coming from any private source. I would be pleased if the Editor would discuss the essential feature of the movable frame hive system-showing that all the appliances of modern bee-keeping can be attached and accommodated to any of the standard frame hives. That the system of honey-producing—"side" and "top" storing—may be followed while using any of the movable frame hives.

Christiansburg, Ky.

[We have never seen one of the "common sense hives," but would judge from the descriptive cut on the circular kindly sent us by Mr. Demaree, that it is virtually the Mitchell hive, with hinges at one side of the bottom, and a sliding cover. With these exceptions, its counterparts have long been in use in the Buckeye hive, Mitchell hive, long-idea hive, and various others of the one-story hives, where division-boards or followers are used for contracting the brood chamber. We see no features or benefits to be derived from its use that cannot be obtained from any of the non-patented movable frame hives, while there are two serious objections to its use—first of which is the restriction upon its general use, in the form of a patent right, and the next objection is the sliding cover. We cannot imagine how this latter feature can be made anything but objectionable.

We do not object to patents on articles which have commendable features about them—when the principle is new or a philosophical or mechanical principle applied to machinery or implements, making real, radical improvements; but the adoption of an old, or, as is often the case, obsolete principle, with a slight divergence from the original, and the issuance of a patent deed to dignify it as *an improvement*, or as an indorsement of its originality, is to that extent legalizing a fraud, and should not be countenanced. The circular devotes about half a page to "reasons why this hive is the best in use," but fails to describe the particular features which make it such. We would advise our friends in Kentucky to "severely let it alone," as also all other hives which have no real merit on which to base a patent, but which are hampered with one to prevent their coming into general use. What we want in America is not more patents on bee hives, but more unanimity in the use of a standard hive, simple in construction and free for all to manufacture and use.—ED.]

For the American Bee Journal.

Increase of Colonies.

A. J. NORRIS.

After reading Prof. Cook's valuable hints on increase of colonies, on page 474 of the BEE JOURNAL, I would like to give my ideas on the same subject.

1st. By all means I prefer natural swarms.

2d. Keep the bees from swarming as long as possible by giving plenty of room for queen and bees; they will give a nice lot of beautiful early honey and a very large swarm by so keeping them back.

3d. When they do swarm, run the first swarm in a nail keg or box, and keep this until a second swarm issues; now have a hive ready with 10 frames (if you use the Langstroth hive) of foundation, or empty combs, and 48 sections filled with foundation; go to the hive where the second swarm has issued and take one comb of larvæ and exchange with one frame in the new hive. This will keep the queen in her proper place. Put the new hive where the keg or box containing the first swarm stood, and shake them out of the keg or box in front of the hive and capture the queen if possible, as they go in; if not, get the queen from the second swarm, which you will now shake down in front of the same hive, return the queen captured to the hive from whence she came, after cutting out all the queen cells. Now you have only one queenless colony, and that will have a queen in 24 hours, 10 beautiful combs which the queen has commenced to fill, and 48 sections under headway. Now take the colony that is deprived of a queen and make 8 or 9 nuclei, selecting the largest and finest developed queen cells. These nuclei can be used to supply queens for later swarms.

My method of transferring is as follows: Have a hive prepared with 10 frames of foundation, drum up the swarm that is to be transferred (as has been described many times in the BEE JOURNAL), and shake them in front of the new hive; if more than one is to be transferred, serve them the same way; now let the old hives stand 14 days and drum up the bees that have hatched in all the old hives, and run them into new hives prepared as for new swarms; run as many in a hive as it will hold with the 48 sections on. Now open the old hives and cut out the honey and what worker brood there is left; fit the worker brood into frames if you have no queen to supply, fit in a choice queen cell, and give each multiplied colony only one frame of this patched brood and a queen cell; if there is any left, give it to the weaker colonies. If properly attended to, you will have no more increase from them. The best time for transferring is just at the beginning of white clover bloom, or at the beginning of any honey flow, when not cold enough to chill the brood or too late in the fall.

Cedar Falls, Iowa.

For the American Bee Journal.

The Utility of Untested Queens.

W. Z. HUTCHINSON.

FRIEND NEWMAN:—Has my reply to Prof. Cook in the *Rural New Yorker* of June 24th escaped your notice? or has a press of other matter prevented you from publishing it? It is as follows:

First allow me to thank Prof. Cook for his kind words in a late article in the *Rural* on the above subject; they are fully appreciated. When an argument is so conducted that at its close each party has a higher opinion of his opponent, there is but little chance for hard feelings; if every one was like Prof. Cook, all arguments would be so conducted.

The only point that I endeavored to make in my former article, and the one that I have so persistently argued in the bee papers during the past few months, is that an unjust discrimination is made by some writers in favor of the so-called "tested" queens, when the only difference under the sun between them and the so-called "dollar" queens is, that the tested queens are known to be purely mated, while, until the progeny of a "dollar" queen hatches, it is uncertain how she has mated; but in nine cases out of ten, "dollar" queens turn out to be purely mated, and thus are eventually tested queens. As before stated, both classes of queens are reared exactly alike, and yet column after column of our bee papers have been devoted to the condemnation of "dollar" queens and not one word has been said against the tested queens. Tested for what? Tested for "stripes" and——$2; "only this and nothing more." Does not Prof. Cook think that the rearing and selling of tested queens for $2, or even $3, have cheapened queens fully as much as the "dollar" queen traffic?

As to how a queen should be tested, Prof. Cook says: "I would have him wait to see if the requisite number of eggs, bees, and pounds of honey are forthcoming, and then, when such assurance was gained, I would pay him $10 for the queen and make money." I heartily agree with him, but I fail to see how or why the "dollar queen traffic" prevents any breeder from testing his queens in this manner and then asking a corresponding price for them. In fact, some breeders have already taken a step in this direction, as they offer for sale "dollar" queens, "purely mated" queens, "tested" queens, and "selected tested" queens. If some reliable breeder will keep his queens until they are a year old and test them thoroughly, I do not think that he will experience any difficulty in selling his "selected tested" queens at almost any reasonable price.

Prof. Cook says: "Does Mr. H. think that our Short-horn cattle would possess their present excellencies had there been no greater inducements to hard and persistent effort than that held out to the bee-breeders of today?" Candidly, friend C., I do not, and until the mating of our queen bees can be as easily controlled as the mating of cattle, sheep and other stock, I do not think that there will ever be any greater inducements held out to the bee-breeders to improve their bees than there are at present, even if the "dollar queen traffic" should be swept away. There is some inducement to buy, even at enormous prices, improved breeds of cattle, sheep and horses, because, with ordinary care, the offspring of such stock will be pure, and will, likewise, command a high price; but there is no such inducement to the purchase of an improved strain of bees, because, even with the greatest care, the young queens may mate with drones from some scrub swarms in the woods.

I do not wish to be understood as saying that there are *no* inducements to the purchasing of improved strains of bees; far from it. The inducements are many, but they are not so great or so many as to the purchasing of stock the breeding of which can be controlled. To a certain extent, of course, the mating of queens can be controlled; we can Italianize all of the bees in the vicinity of our apiary, but to have each stock within three or four miles produce number one drones, would be an almost herculean task. When fertilization in confinement, or something of the sort, is made practicable, then, I doubt not, there will be plenty of breeders who will set to work and will succeed in producing a superior strain of bees. At present, however, in order to obtain positive results and know how they were obtained, so that it can be done again and again; it is necessary to adopt the plan put in practice by Mr. D. A. Jones—that of breeding bees upon isolated islands.

No one would be more pleased than myself to see an improvement in our bees. I try to be unprejudiced in the matter, but to me it appears that the rearing and selling of "dollar" queens does not "retard the progress of American apiculture," or stand in the way of the best achievements," any more than the rearing and selling of native cattle, sheep and horses prevent or hinder the development, breeding and dissemination of improved breeds of these animals. Instead of being a damage, I think that dollar queens have been a benefit and a blessing to apiculture. Thousands now have the peaceable, industrious and beautiful Italians, who would yet have the native bees had the prices of Italian queens been kept at a high figure, while any breeder is free to improve his bees as much as he pleases, and if he succeeds in producing a superior strain, he need have no fears but what he can sell his queens at a high price.

Rogersville, Genesee Co., Mich.

For the American Bee Journal.

Dunham vs. Given Foundation.

J. V. CALDWELL.

The comparative merits of the different styles of comb foundation now offered by different manufacturers is worthy of the most earnest and careful attention of the apiarists of this country. That there is a decided difference, does not admit of a doubt, but which is the best? That is the important point to be decided by the average bee-keeper.

I have taken as my subject this evening two of the popular makes. The Dunham machine is, to me, like an old and tried friend, and the longer I use it, the better I am satisfied with the product of its matchless rolls. My brother apiarist, Mr. Heddon, thinks first class foundation cannot be made on this machine without a large amount of trouble and vexation of spirit. Well, in all deference to his longer experience with foundation machines, I must say I can and do make first class foundation on this machine, and work also that satisfies a large and most fastidious class of customers. Mr. Heddon claims for the Given machine, a thin septum, and large, deep, but soft outlines, and that the bees manipulated it much quicker than the rolled foundation. Well, as the "test of the pudding is in the eating, let us see how the matter stands. He says: "Hive a prime swarm on 8 frames of the Given wired foundation, and in 48 hours, you have 8 splendid combs completed." This I grant, but I have repeatedly this season hived full, strong swarms on a set of 11 frames, 8x19, filled with Dunham foundation, and in 3 days it would be filed with comb and honey, and every comb drawn out in a perfect manner, and with no sagging whatever, but to accomplish this, three things are necessary:

1st. The foundation must be made of good, tough wax.

2d. It must be fastened to the frame in the most perfect manner.

3d. It must (in my opinion) be made on the Dunham foundation machine.

Now, if there is a better machine made I want it, and my customers also will demand it, but I venture the assertion that where 1 pound of the Given is made and sold, 100 pounds of the Dunham is disposed of in like manner; but I think the real cause of Mr. Heddon's discarding the Dunham machine was his inability to make it do good and speedy work. I gave in my last article a fair statement of the amount of good work I could do on the Dunham machine, and Mr. Heddon gave a partial account of his work on the Given machine. He says he made 271 sheets with one lubrication of the book, but I would be pleased to know the size of the sheets and the amount of time he used in doing the work. Of course, we want only the best foundation to use in our apiaries, then let us in a friendly spirit bring out all the good points in this important branch of our business.

Cambridge, Ill., Aug. 8, 1881.

For the American Bee Journal.

How to Exhibit at the Fair.

J. H. MARTIN.

As I have had some experience in exhibiting my products at our county fairs, I will give a few hints for the benefit of those who are now preparing for such an exhibit.

We all have a little selfish motive in the display of our articles. If we manufacture bee-fixtures, we wish to extend our trade; if we sell honey, our object is to let people know where the genuine article can be found.

The summer of 1879 was a very good honey season with us, our 100 colonies averaged nearly 100 lbs. each, our best gave us 208 lbs. of extracted, and our best yield of comb honey was 106 lbs. This was the best yield of honey that any one had ever obtained in this county. We felt like bragging a little, and the bragging took the form of an exhibit at our County Fair. The exhibitor generally wishes to make as much of a spread as possible. It is, therefore, well to put your honey in small packages. We put up our 208 lbs. in pint fruit jars, and put six jars in a neat basswood crate. The crate was made so as to hold the top and bottom of the jar firmly, while the sides were open, giving a good view of the honey when the whole was piled up crate upon crate in pyramidal form.

Our comb honey was also put up in narrow crates of different lengths, with glass sides. In placing such an exhibit, it is a good plan to get before a window if possible. Your liquid honey will then show to good advantage. All of the honey should be carefully graded, basswood, clover and buckwheat. A few jars of each kind should be opened, and a few teaspoons in readiness to let those who desire test the different qualities of honey. Much can thus be accomplished toward educating people in relation to the taste of honey from different plants.

By the side of the honey exhibit should be the wax exhibit. The wax should be run in cakes of different size and shape. Our pile of wax was finished out with a sharp-pointed cone, with two small flags attached to it. Foundation in sheets, thick and thin, in wired frames, in sections, in long narrow ribbons looped up, and in various colors if you choose. A pretty centre for your wax exhibit is a beautiful wax cross and clinging vine.

It is needless to advise the exhibition of a foundation machine, extractor, knives, queen cages, etc., for these are the first things the bee-keeper usually thinks of, and will have a prominent place.

Finally, the observatory hive should be upon exhibition, and where the crowd can easily see it. We have seen several descriptions in the bee papers of late about such hives; but there is one point in my hive unlike any we have seen described, I will therefore tell how I make an observatory hive. My first hive was made to be placed upon a shelf, and if a person wished to look at the bees and queen the hive was passed around. Such a hive is in danger of being tipped over, or the glass smashed. I therefore improved my hive by placing a two inch block under the centre of the hive, in this was bored an inch hole; another board was provided with a peg two inches in length to fit this hole. This board was securely screwed to the shelf. The hive could thus be turned readily upon its centre, and it was placed where the crowd could stick their noses right against the glass. That hive was a success. There was a crowd of old and young around it all of the exhibition hours to see the queen bee. I have seen many a pair of spectacles adjusted to get a good view of her. The observer would then go off at a tearing rate to hunt up somebody else on purpose to see the queen bee.

An observatory hive should not be crowded too full of bees; just enough to cover the comb. It is a good plan to adjust the bees to the comb before you leave home. A comb at least a year old should be selected, with some sealed honey, plenty of empty cells, and perhaps, a little hatching brood. If you get a sensible queen in the hive, she will deposit eggs right before folks, and you will then have a clinching argument for those who do not believe there is a queen, or that one bee lays all of the eggs.

I think the above plan for an exhibit, with as much more as you wish to add, will give ample room for almost any bee keeper to spread himself. Above all, do not attempt too much. Exhibiting bees on the wing will not work at a common county fair. We attempted too much once on a time, and made a failure of it.

One more point: insist on having your exhibit all together in one place. At some fairs your hive would be put in class 8, division 4, your honey in class 2, division 6. To divide your exhibit up in this way would destroy its utility and charm entirely. See the managers of the fairs several days beforehand, explain just what you want and how much room you want; get your location, and be on hand early in the morning on the first day of the fair. If the managers do not give you a good space, or if they go back on you, as they do sometimes, do not exhibit a thing at their fair, and if anybody tries to crowd you out of your space, or crowd on at each end, you can first remonstrate, then reason, and if that don't keep them off, then fight.

I could give several more items in relation to this subject, but I must save a little of my ammunition for a few of the other bee papers. I did think of writing my experiences all out for the BEE JOURNAL, then do as some of our eminent friends do, commence at the last paragraph and write back to the beginning and send it to *Gleanings*; then commence in the middle and write both ways and send it to the *Exchange*; then go over it diagonally for the *Magazine*, then take it on the bias for the *Instructor*, and so forth.

Hartford, N. Y., Aug. 9, 1882.

The National Convention.

We have received from Prof. Cook the following circular relating to the above convention. We greatly regret we shall not be able to attend, but circumstances beyond our control will make our absence imperative. We regret it more especially, as this will be a most interesting meeting:

The next meeting of the National Bee-keepers' Association promises to be a grand success. Such men as D. A. Jones, A. I. Root, James Heddon, O. O. Poppleton and Dr. J. P. H. Brown have promised attendance.

It is expected that the Association will visit in a body, the apiary of Mr. Hill, of Mount Pleasant, which is one of the best conducted in the States.

Mr. D. A. Jones will exhibit specimens of the bees of the Indies, including the famous *Apis dorsata*.

There will also be exhibited at each intermission, miscroscopic preparations, showing structure of the sting, mouth-parts, etc., and of the so-called dry feces of bees.

Let some bee-keeper of each leading city look after railroad rates. It will be the last week of the great Cincinnati Exposition. This is a great attraction, and will make it easy to secure reduced rates. Round trip tickets from Detroit are promised for $5. A. J. COOK, *President*.

SELECTIONS FROM OUR LETTER BOX

Foul Brood.—Bees have done very well here this season, so far. White clover has yielded good until about the first of August. On 10 swarms (spring count) and increase, I have put 725 one pound sections, and taken off 300, while the rest are from ½ to ⅔ full now, and 4 swarms went to the woods that I know of. I do not know how many more, as I have not watched them while swarming. My bees have had foul brood 4 years. Four years ago last May I spread the brood and inserted empty combs until the bees deserted one side, and cold weather coming on chilled it, and in a few weeks it was the foulest hive I ever saw, and the bees dwindled entirely away in 2 or 3 weeks more. The next two seasons were poor for honey, and the disease damaged them about 25 per cent. Last season and this being both good for honey, it has not damaged them more than 10 per cent. They are strong now and doing well, though I can see a little in every hive from the larvæ just beginning to melt down with it to the capped, perforated cells. I am thinking of brimstoning them this fall, and buying a new lot. Do you think I can keep them in the cellar where I did the others, and put them on the same ground without their getting it? I would like to know the experience of others who have kept foul brood several years.

E. W. Felton.

Hastings, Minn., Aug. 5, 1882.

[We believe the cellar can be fumigated and disinfected so it will be safe to keep the bees there, but we doubt using the same stands and grounds, unless the winter be very severe.—Ed.]

Customs Duties.—I purchased one of Mr. Jones' colonies of best Italian bees, which I received on the 30th of May. I had a good, strong swarm July 3d, which I had to put into a hive of empty frames, having written to Mr. Jones, as I thought, in good time for foundation, but as I learned since, he was too busy to attend to it in time, but I have received it since. I got a second swarm on the 11th, not so large as the first, still, I think, doing nicely, so I am now rejoicing over three good colonies of Italians. I am not boasting of having done anything great, neither do I feel capable of anything like that yet. I read of some who have had a shorter practice, outstripping me wonderfully; however, I take courage and go on in my own feeble way, and I do not know of anything that I could delight more in than working among bees. For the second swarm, I took a few of the best out of some old combs that I had by me, and fitted them into the frames the best way I could, by pegging them in, which the bees have fastened. I took a full frame of honey from No. 1, and put into No. 3, for I have numbered them by making the figures 1, 2, 3, and gummed them on the hives in order, and as Nos. 1 and 2 are pretty strong in bees, I have taken two more frames to-day from No. 1, having both honey and brood, and put them into No. 3 to strengthen them in preparation for winter, and placed in No. 1 frames of foundation. I state this by way of inquiry, as to whether I have done right, or could have done better in some other way? I see but very few drones indeed; neither do I see any drone cells in any of the combs. I cannot say whether the queen of No. 3 has been mated or not, but a short time will tell. Will you please give me such information as you consider necessary on this subject, supposing it to be the case? I see in the present volume of the Bee Journal, in answer to an inquiry whether there is any customs on "Bees and Honey sent to Canada," I think it is, and the answer is, there is not. I got that work from you, and was charged 15 cents customs, the book being valued about 30 cents. That makes the price pretty high. I find the Bee Journal and "Bees and Honey" choice companions, real necessities; to possess and use them is to enjoy the beauties of nature.

Edward Moore.

Barrie, Ont., July 21, 1882.

[You did well in building up your third swarm from the two stronger. The queen with the last will have no trouble in mating, as the bees with an instinct almost equal to inspiration, provide for these contingencies.

There should have been no duty demanded on the book. When works are sent singly, either by mail or express, to actual readers, and not for traffic, they are not liable to customs duties.—Ed.]

Good Season in Utah.—The prospect of a booming harvest for the bee-men of this county are beginning to be realized. There has not been a better year for the development and the true worth of the bee to be made known than the present year, although we have had some very cold storms that have kept the bees from doing many times what they desired to do. Out of 16 bee-keepers this spring, with 77 colonies of bees (5 having died since T. W. Lee reported to the Convention in Salt Lake City, April 6th), we now have 171 colonies, and 20 bee-keepers. The yield of honey I am not able to give at present; 3 swarms took to the mountains, and these swarms belonged to some of our old hands at the business. The honey yield would be much greater if we had more extractors, only 8 being in this settlement, and 20 should be the number, as those that have them cannot very well spare them around. I think the motto of Prof. Cook, "keep your colonies strong" is a good one, as I have done it in 2 colonies, and have taken 30 lbs. of honey from each top story of the 2 hives every week for the past 3 weeks. I find the bees in some of my colonies are killing off drones as they get stronger. Our honey yield is not over yet, as we have plenty of lucerne, clover, corn, squash, flowers, etc. Sweet clover we also have, but it is going all over our field, and would be better without it if not controlled better. Would it be wisdom to use old comb that was in hives which were infected with dysentery? Would it not be better to melt the comb?

John Dunn.

Tooele City, Utah, July 27, 1882.

[We cannot recommend using old combs where the bees have died from any cause; nor would we use moldy combs, except singly, and then only in very strong colonies, where they can be cleaned up thoroughly in two or three hours.—Ed.]

A Honey Plant.—I send a honey plant for name, the last in bloom, and a profuse honey plant the first half of the season. We are having a dearth of honey-producing plants. Corn is just coming in tassel.

J. D. Enas.

Napa, Cal., July 19, 1882.

[The honey plant is *Heteromeles arbutifolia*, for which I know no common name. It belongs to the *Rosaceæ*, or rose family, and was formerly put by some botanists in the genus *Cratægus* or Hawthorns. We shall not, therefore, be surprised to learn of its attraction for bees, though its kindred with us do not retain long these attractions. The species is, so far as I know, confined to our western coast, except as it has been disseminated by man. It is esteemed worthy of cultivation as an ornamental shrub, but is not hardy in this latitude, east of the mountains. Its immediate relatives are natives of China and Japan, none of which bear out-of-door exposure with us.—T. J. Burrill.]

Width of Sections.—An article appeared in No. 19, page 297, of the Bee Journal, in regard to the use of 1¾ inch sections. Another in No. 29, page 456, entitled, "Width of sections, etc." This is a very interesting subject to me, and must be to all beginners, and I would like to hear the opinions of others on this point, for if we can get ⅓ more honey without the expense and inconvenience of separators, and gain ⅓ in space, it is a gain and saving worth looking after.

A Beginner.

Syracuse, N. Y., Aug. 7, 1882.

All Swarms and No Honey.—Bees in this locality have done nothing this summer. All swarms and no honey this far. Italians are working finely now, and will gather some surplus honey. I think we will have a splendid fall harvest, on account of the recent wet weather.

Wm. Hartman.

New Harmony, Ind., Aug. 7, 1882.

Cleaning Wax Extractors.—This has been a very poor season for bee-keepers here. In the spring it was too cool for queen rearing; later, came almost continuous rain, bees losing fruit bloom. White clover blossomed, but yielded little nectar. Of basswood we have none worth mentioning. We shall have a few swarms, but little surplus honey for the year of 1882. Please tell in the BEE JOURNAL how to clean the basket of a wax extractor. W. R. YOUNG.
Myersville, Md., July 31, 1882.

[Perhaps the most convenient method is to immerse the basket in boiling water, when the wax will melt from it, and can be skimmed from the water when cool; or it can be wiped off by taking from the water and rubbed while hot. A strong solution of sal soda or benzine is said to remove the wax very readily by dissolving it, when it can be wiped off with a coarse cloth.—ED.]

My Report to Date.—From 10 colonies, spring count, I have had 300 lbs. of comb honey, 100 lbs. of extracted, with an increase of 9 colonies. I may say that all of this honey was obtained from poplar bloom, in May; since that time the bees have been barely making a living. White clover was scarce and did not yield much nectar. Last fall in September we had a yield of honey from some source unknown sufficient to winter on. What may be expected this fall I cannot say. Taking it altogether, the season has been unpropitious. My smoker trade has helped me out of the drag very materially and I am in no wise discouraged. As I cannot do without the "JOURNAL" I herewith remit my subscription money. W. C. R. KEMP.
Orleans, Ind., Aug. 9, 1882.

"Apis Mellifica."—Tell Mr. James Heddon to use a large dose of "aqua frumenti distilatum" just before going into his bee yard, and that it will not kill him; one poison kills another, just as quina to cinchonism cures malaria, or whisky, snake bite. I am no whisky head either. The honey season is over here. The bees are hanging out and lying around, nothing to do. Aster and the fall weed bloom will be in now in 10 days, then we'll have business.
J. A. BURROW, M. D.
Santa Fe, Tenn., Aug. 7, 1882.

Sweet Clover the Only Hope.—It is now very dry in this vicinity. White clover and linden are with the things that were, and if it was not for the sweet clover, bees would be idle. Still, they keep up their hum of rejoicing from sunrise until dusk, bringing load after load of transparent nectar, that God, in his allwise providence, causes to be secreted in the bloom of melilot or sweet clover.
H. W. GARRETT.
Coeyman's Hollow, N. Y., Aug. 7.

Dividing and Introducing.—Having received an Italian queen by mail, I opened a strong colony of blacks, hunted up the black queen and set the frame she was on in a new hive, placing alongside of it another frame of honey and capped brood, with adhering bees from the same hive. I then filled up the new hive (which contained the black queen) with frames of foundation, and placed it on the old stand. I next moved the old hive from which the black queen had been taken, to a new stand a short distance away, opened it and caged the Italian queen on a frame of honey and capped brood. She was released after 48 hours and moved about among her young subjects. The old bees by this time had apparently all left the hive and gone back to the old stand and joined their old queen. I examined the hive containing the yellow queen daily, and found the combs covered thickly with young bees, which were constantly emerging from their cells, but for two weeks scarcely any bees have appeared at the entrance of the hive, or gone out in quest of stores. A limited number are beginning work from the Italian queen's hive, while the hive where the old black is ruling seems as busy and populous as originally. The question is, was my practice the correct one? or, if not, how should it have been bettered? E.
Highlands, N. C., July 29, 1882.

[Your practice was quite right, as far as safety goes, but a little troublesome. You have seen but little work from the colony where the Italian queen was placed, because you depleted it entirely of field workers, and the young bees left were all engaged in nursing and brood-rearing.—ED.]

Fertile Worker.—Mr. Osborn's letter in the BEE JOURNAL of the 17th ult., describes this bee similar to a case we had last fall. We found a queenless colony with a fertile worker. There was no brood in the hive except a few capped drones and three large queen cells attached to drone comb. On examination, we found the queens all dead. They had evidently lived until within a day or two of hatching. From all appearance, they were as well-developed queens of their age as I ever saw. What caused them to die has remained a mystery. It being too late in the season to rear a queen, we purchased a Cyprian queen. The bees kindly received her. She is now filling her third hive by natural swarming this summer. M. BROTHERS.
Fincastle, Ind., Aug. 2, 1882.

Ground is Baked like a Brick.—Our harvest of white honey is over, with but small surplus. Fearful hot and dry, and owing to the extreme wet previous to July 10th, the ground is baked like a brick, and vegetation is drying up. I do not expect any honey from buckwheat, on account of drouth. G. M. DOOLITTLE.
Borodino, N. Y., Aug. 7, 1882.

Mr. Shuck's Problem.—I see a reply to Mr. Shuck's problem, which I believe to be incorrect, as I divided several colonies, which had the effect of giving them dysentery. The first I only noticed after three days, being absent for that time, but two others had the entrances bedaubed within one-half hour from the time of dividing. My bees, as yet mostly blacks, have the last few days been working on red clover. Allow me to widely differ from Mr. Heddon in his way of transferring. In the spring brood would be apt to chill, and they would be apt to be robbed then and later. I know of one man who tried the plan on the 24th inst., and a colony of Italians drained the old box of honey in a few hours. Basswood is just opening, and the trees are covered with bloom. So far there is nothing to crow about.
R. F. HOLTERMANN.
Fisherville, Ont., July 27, 1882.

[There is no need to drive so close as to risk chilling, and a very little trouble will avoid the danger of robbing for a few days, when new bees will be numerous enough to take care of the stores. It seldom, however, occurs that transfers will be made by this method when the weather is cold enough to endanger chilling, as it can be done as well during a honey flow as at any other time; whereas, by the old method, it is desirable to do so before there is a great deal of brood and not much new honey.—ED.]

Juneau County, Wis.—One thing sure, we are happy with our bees for there is generally an abundant flow of the nectar in this region to support the bees and to produce from a little to a fair yield of surplus honey. For many seasons I have never failed to see the bee-keepers about the villages with their little boxes of honey for sale, and they never had much trouble in getting them off their hands. But, under the old management, and from the pressure of other duties, the yearly honey crop was always light, and there might have been times when little or no honey could have been bought within the limits of this county. A change has come over this business, so that under what is styled modern bee-culture, the production of honey has been prodigiously increased here until there are many tons of the precious sweet gathered in annually and put in the most desirable shape for the market and the consumer, and what cannot be disposed of in the local markets, is shipped to other parts of the world. But, happily there is a growing demand for the article at home, and the local market is being well supplied from the apiaries of the Hon. C. H. Grote, the Rev. H. V. Train and Mr. Franklin Wilcox, gentlemen who stand among the most learned, and at the same time most practical bee-men of Juneau County. They manage to keep their bees through the long and dreary winters,

which are quite frequently very cold in this latitude, although the last winter was a very mild and pleasant one, favorable to the safe wintering of bees. But with the first of March there came cool and gloomy days, clouds were hanging overhead in a threatening manner the whole month through, and it seemed as if winter was about to commence in earnest. To say that it was a disappointment, after having had such pleasant passage by the winter months only to get into a backward spring-time, is but a feeble expression; still, the weather was never bitter during the spring opening. April and May were not very good, still during those months and up to the present time there have been but a very few days that the bees have remained at home all day long. The present week has been a week of the most beautiful showers that I ever saw, and the clouds are still flying in haste towards the southwest, and as the light from the sun occasionally bursts forth through some of the openings above, the merest showers of rain are sometimes seen falling in the sunlight and producing scenes worthy of attention. The atmosphere is warm, the fields of buckwheat are getting whiter, and the bees are on their wings every hour during the day-time. From the present view of things about here, one would think of a heavy yield of surplus honey in the next few weeks to come, and of a mild winter following.
JOHN MORRIS.
Mauston, Wis., Aug. 5, 1882.

Entomological.—I herewith send you a worm that I caught on the alighting-board of one of my hives. When taken, it was about one inch in length, nearly blood-red, and about ½ an inch thick. Please give it a name.
S. C. FREDERICK.
Coal Valley, Kan.

[The "worm" is the caterpillar of a silk-spinning moth, *Bombycidæ*. It was only accidentally upon the alighting-board of the bee hive. It feeds only on green leaves, and I judge upon those of the soft maple, but the specimen is not in condition for me to certainly pronounce upon the species.—T. J. BURRILL.]

"Golden Dollars vs. Golden Bands."—Mr. Benedict says, "There is another class of breeders who make it their steady aim to breed bees as light-colored as they can, and they have succeeded in producing what appears to be a distinct variety of bees." Perhaps this is true, but the majority of us keep bees for the honey that they will gather, and we care little whether the bees are a distinct variety or not, so long as the honey is forthcoming. We care much more for the golden dollars than we do for golden bands. Mr. B. further says, "Such breeders cannot afford to sell queens for a dollar each." Will he please tell us why it is any more expense to breed from light-colored stock than from dark? Light-colored, home-bred queens can be obtained for breeding purposes of reliable breeders, at much less figures than can imported queens, such as, at least, the majority of the breeders of dark bees and queens breed from.
W. Z. HUTCHINSON.
Rogersville, Mich., Aug. 4, 1882.

Whose Loss is it?—Two months since I received an order for a copy of Cook's Manual, which I can certify was immediately sent him by mail, properly addressed. The person who ordered it, now informs me that the book has not been received by him. I would like to know if it is right for me to suffer the loss and send him another copy? Please answer this question in the BEE JOURNAL, and oblige both the buyer and THE AGENT.

[The loss is undoubtedly for the person ordering it, if it can can be shown that it was properly mailed. Had it been registered, (costing 10 cents extra) it could have been traced, but now it cannot. Some dishonest employe of the mail service probably "appropriated" it. When such is ordered from this office and lost, we usually divide the loss with the person ordering, and although we have nothing to do with this transaction, we will send a copy to the person losing it, upon receipt of one-half of the price of the book, so as to save hard feelings between bee-men.—ED.]

My Honey Crop.—I have already taken from my bees over 2,000 lbs. of as nice honey as I ever saw, and can take about 1,000 lbs. more in a few days. This season has been a very fair one with me, although the old style bee-keepers in this county have complained of the scarcity of honey and have secured very little surplus, and even that in bad shape. Honey is selling for 20c per lb. in 2 lb. sections, and 15c per lb. for extracted.
L. J. DIEHL.
Butler, Ind., Aug. 4, 1882.

Honey Enough to Winter On.—Bees have done nothing here this season. Strong colonies have now almost enough to winter them. September may yield us a surplus.
JOS. M. BROOKS.
Columbus, Ind., Aug. 5, 1882.

Iron Lugs for Hanging Broad Frames.—I note the letter of Rusticus, in No. 31, 1882, about hanging broad frames without top-bar. I have sent out a number of hives with the device spoken of, and send you herewith two pairs of lugs, or projections, for the purpose. I now make my broad frames with wooden separators fixed permanent, nailed to stay, top bar removable, not nailed; and then with these metal projections, wide frames of sections are very handy. Two frames are placed face to face in the hive, and you have all the advantage of a four-inch box the size of the frame; after work is well started, turn half of the frames around and all the advantages of separators are secured, and none of the disadvantages. To take out sections, pry off the top bar and all is easy. I have used them four years. No patent.
J. M. SHUCK.
Des Moines, Iowa, Aug. 3, 1882.

[The metal projections mentioned consist of cast iron, so made as to screw on the tops of the end-bars of the broad frames, and rest on the rabbets. Mr. Shuck describes above their method of using too plainly to require any attempt on our part, or to be misunderstood.—ED.]

Afraid of Robbing.—My wife, self and one boy have attended 78 colonies and some 8 or 10 nuclei. Have taken 6 30-gallon barrels of honey (about 2,161 lbs.) with the extractor, and between 700 and 800 lbs. of comb honey. We have a good home market at 20c. for comb and 10c. for extracted honey. The harvest is just closing with us. Black sumac and privet or buck bush are our main resources for July. We will now have a honey dearth till the 1st of September, when will come the aster or hybrid Spanishneedle, which gives us our largest crop in valley locations. I took most of my comb honey in 2 lb. sections, and found ready sale for it. My hives are full of honey and capped, and I fear that the queens will be crowded out. The bees are ill-natured, and I fear robbing if I extract any more. What would you do in such a case? I am using all the foundation they will draw out.
J. T. BRUTON.
Joplin, Mo., Aug. 5, 1882.

[Do your extracting mornings and evenings, when the bees are not flying much. It will be necessary, of course, to do the extracting in the honey-house, or a room that will be secure against intrusion. You can lift the outer frames in the morning, extract during the heat of day, and in the evening spread brood frames in the hive and return the empty combs, alternating them with the brood combs, or putting them in the center. Do not extract too close—four frames from each brood chamber should be sufficient.—ED.]

A Good Season.—The honey season here has been a good one; white clover has been in bloom for eight weeks. My bees have done well in the sections; am using the 1 lb. section, and like it very much. Bees had quit swarming, but to-day I had a large swarm come off. The prospect is good for fall honey, as the cornfields are full of smartweed, owing to the wet weather.
J. V. CALDWELL.
Cambridge, Ill., Aug. 7, 1882.

A Fair Yield Anticipated.—Bees doing ordinarily well. Very few swarms cast this far, and but little surplus stored. Should the wet weather continue, I anticipate a fair yield of fall honey.
JOHN Y. DETWILER.
Doniphan, Kan., July 31, 1882.

THE AMERICAN BEE JOURNAL

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Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

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For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

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Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid ; per dozen, 50 cents ; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Examine the Date following your name on the wrapper label of this paper ; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Emerson Binders.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

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Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs ; this is also added to the above. Price, 10 cents.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

◆

☞ When you meet with an accident, get a sprained ankle, or otherwise injured, don't go to the expense of sending for a doctor, but apply Kendall's Spavin Cure, and you will experience instant relief. 32w4t

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THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

PLEASE NOTICE the price of Tested Queens in the advertisement of W. Z. Hutchinson. He has a large stock of fine Queens on hand, and can fill orders promptly,
33smtf

HENRY ALLEY, WENHAM, MASS.

Queens Worth $2.00 for $1.25.

Large, handsome and beautiful. Every one warranted as good in all respects as tested queens. No loss of queens by mail in my new cages—all go safely. Safe arrival and purity guaranteed. Italian, Cyprian and Holy Land Queens by return mail. No money required until queen is received.
33w3t

Ten Colonies of Italian Bees

for sale at a bargain. Warranted Italian Queens, $1.00 each. For particulars, address J. P. MOORE, Box 27, Morgan, Pendleton Co., Ky. 33w1t

WANTED—A situation with practical apiarist, by a young man, carpenter, of experience with bees in Germany. Wages required moderate. Will make himself useful. Address FREDERICK LORENZEN, 36 Cornelius street, Chicago, Ill.
33w1tp

WANTED—A situation in an apiary, by a young man of 3 years' experience. Will work cheap, and endeavor to give satisfaction. Address, DANIEL W. DUFFIELD, Dearborn, Mich. 33w1t

To Foundation Manufacturers.

I have 80 lbs. of beeswax I wish made into comb foundation, some of it drone size, and some thin for boxes. Please send me samples and prices. Address, **CHARLES FOLLETT**, Osage, Iowa. 33w1t

40 TONS

Of Comb Honey wanted ; York State preferred. Say how much of each grade you will probably have, size of section, how soon it can be in shipping order (the whole or part of it), lowest cash price, and address F. I. SAGE, Wethersfield, Conn.
33w4tp

1882-Southern Headquarters.-1882

For Early Italian and Cyprian Queens ;

Imported and Home-bred ; Nuclei and Full Colonies. For quality and purity, my stock of bees cannot be excelled. I make a specialty of manufacturing the Dunham Foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Catalogue, giving directions for introducing queens, and remarks on the New Races of Bees. Address,
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20 Years Experience in Queen Rearing.

Our Motto is :

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Italian Queens.....$1 ; Tested....$2
Cyprian Queens....$1 ; Tested....$2
Palestine Queens..$1 ; Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian, Cyprian or Palestine, $4 ; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1wly.

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REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates : Tested Queens, $3 ; Warranted Queens, $2 ; Queens without guarantee, $1 ; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

AT LULING, TEXAS.

I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.

14w39t **J. S. TADLOCK.**

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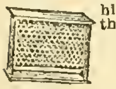

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **25c.** per pound, delivered here, Cash on arrival. Shipments solicited.

To avoid mistakes, the name of the shipper should always be on each package.

ALFRED H. NEWMAN.
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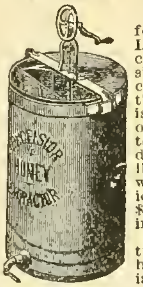

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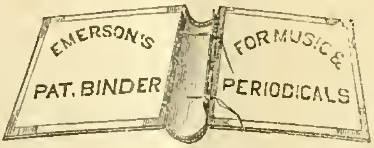

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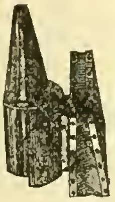

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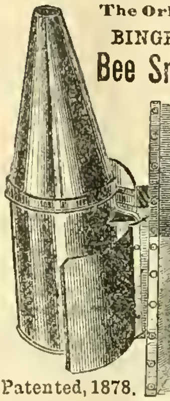

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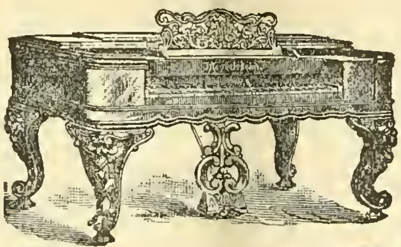

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Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. This contains many useful hints.—Price **15c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and and when and how: 26 engravings. Price, **10c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees, Price, **10c.**

Food Adulteration; What we eat and should not eat. This book should be in every family, and ought to create a sentiment against adulteration of food products, and demand a law to protect the consumer against the numerous health-destroying adulterations offered as food. 200 pages **50c.**

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Chicken Cholera, by A. J. Hill.—A treatise on its cause, symptoms and cure. Price, **25c.**

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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items 529, 531
Statistics on Bees and Honey.................. 529
Bees at the Michigan State Fair.............. 530
Wax Rendering.................................. 530
The Weather for August and September.. 530
Glucose or "Sugar" Meal...................... 531
Wise Precaution................................ 531
British Honey Shows........................... 531

Convention Notes—

Local Convention Directory.................. 532
Norfolk, Ontario, Association............... 532
National Convention........................... 532

Among Our Exchanges—

Care of Comb Honey........................... 532
Bees Blotting Out Railway Signal Light .. 532

Correspondence—

Reversible Frames, etc.—A Visit............ 533
My Strain of Leather-Colored Bees......... 533
A Crumb for the Curious...................... 534
Mr. Abbott on Bee Excretions 534
Bee-Keeping in Belleville, Ontario......... 535
Humor Practically Applied.................... 535
Apis Mellifica Poisoning 536
The Habits of Honey Ants..................... 536
A Few Honey Plants............................ 537

Selections from Our Letter Box—

Indian Currant or Coral Berry 538
Hive Covers 538
Shuck's Problem................................. 538
Queen Cages...................................... 538
Sowing Catnip Seed............................ 538
Tri-State Fair 538
Late Swarming................................... 538
Linden a Failure................................. 538
Crops were Never Better...................... 538
Progressive Transferring...................... 538
In Regard to Swarming 539
The Dzierzon Theory........................... 539
Rejoinder to Mr. Vandervort................. 539
Mountain Mint................................... 539
Basswood Come and Gone.................... 539
Immense White Clover Crop................. 539
Shipping Crates 540
No Honey from Basswood 540
Is Satisfied.. 640
Robbing Parent Colony 540
Crops Enormous 540
Reversible Frames.............................. 540
Fall Italianizing................................. 540
Best During Fourteen Years................. 540
Bees Robbing.................................... 540
Bees Increased 250 per cent................ 540

Statistics on Bees and Honey.

As the time rapidly approaches for the convocation of the North American Bee-Keepers' Society at Cincinnati (Oct. 3-5), State Vice Presidents should be preparing to make tabulated statements of the industry in their respective States. Heretofore but little concert of action on their part has been manifested, and except that the BEE JOURNAL gave each year an estimated approximation to the crop and business, no information has been furnished of the number of colonies of bees in the country, annual increase or diminution, net amount, kind and quality of honey produced, success and manner of wintering, and styles of hives in use. Of course these tables were in some respects most valuable data, but as we could only reach our readers, we could not deny that the tables fell far short of being accurate in their recapitulations, and after weeks spent in corresponding, in perplexity, and in uncomfortable headaches, we were still obliged to admit they were but estimates. Even then, with our self-imposed task as perfect as we could make it, we were assailed by some because it was incomplete, the parties finding most fault having done but little or nothing to help us in our work, not taking enough interest in a public enterprise to render their own private reports.

To be sure, the United States Census Bureau is supposed to give reliable tables upon all matters pertaining to the stable wealth of the country, but those reports are collated only once in ten years, and then the time is nearly half consumed till the next decade before the report is published. If the President of the North American Bee-Keepers' Society was to issue a circular to the several State Vice-Presidents, urging the importance and necessity for brief tabulated statements to be submitted to the Convention, and by their Secretary to be massed in a general statement, it would afford a useful and fruitful theme for discussion and legislation by the Society. These Vice Presidents could urge the matter upon the bee-keepers in their respective States through the bee papers and agricultural publications, and by means of public and private methods, and thus could be accomplished much more than can be done by any single enterprise.

A correct and reliable report of this character would be a matter of national importance, and we believe can be accomplished only through the National Society. In this connection, it is gratifying to be able to commend several Vice Presidents who have already taken the initiative in this matter; but in order to make the report as reliable as possible, and avoid complications which may embarrass the Secretary, or entirely destroy the report's usefulness, we beg to suggest that President Cook or Secretary Parmly furnish to each of the Vice-Presidents a tabulated form to be used in making up their reports. Uniformity will greatly assist in its compilation.

* * *

☞ By referring to page 503, it will be seen there is a movement on foot to organize a Tri-State Bee-Keepers' Society, to comprise Ohio, Michigan and Indiana. The meeting takes place in the evening of Sept. 13. Prof. Cook, Thomas G. Newman, and many prominent bee-keepers have accepted invitations to be present.

Bees at the Michigan State Fair.

The managers of the Michigan State Fair are exhibiting a business energy worthy of the highest commendation, and in advance we predict for them the most interesting and successful Fair Week they have ever experienced. The following circular has been quite extensively distributed to bee-keepers, and will stimulate an appreciative response on their part, that will make the apiarian department one of the most attractive features of the Fair:

The Michigan State Agricultural Society are fitting up on the fair grounds at Jackson, Mich., a fine building for the exhibition of bees, honey and bee-keepers' supplies with a wire room in one part for the exhibition of bees. The Society offer premiums amounting to one hundred and fifteen dollars, the largest ever offered by any Agricultural Society in this country. It is open to the world and it is hoped and expected that each and every bee-keeper will avail himself of this opportunity and make one grand exhibition of bees, honey and supplies. The last day of the fair will be a grand sales day, when each exhibitor can sell anything on exhibition and not wait until after the fair is over as heretofore. This will bring a great many bee-keepers on the last day; for they can buy and take off the grounds anything on exhibition. A large number of the leading bee-keepers have promised to be there and exhibit, and the display of bees, honey and supplies will be very large.

A special premium will be given to any lady making the largest and best display of bees and their products.

The fair commences on the 18th of September and will close the 22d. Any bee-keeper unable to attend the fair in person and having anything he wishes exhibited or sold, will send it by freight or express, charges paid, to H. D. Cutting, Jackson, Mich., when it will be taken care of according to instructions.

For any information write to H. D. Cutting, Clinton, Mich., chairman of committee for State Fair exhibition.

As with the Tri-State Fair, it will be seen, an opportunity will be afforded all exhibitors of apiarian products to dispose of their goods on the ground, thereby not only saving the expense and trouble of returning the goods home, but providing a highly appreciative market for the disposal of them, after having furnished transportation free, or at much less than usual rates for exhibitor and products.

It is highly gratifying to know that our earnest and persistent efforts for several years to cause the recognition, by the public, of bee-keeping as an important factor in our national wealth, is meeting with responsive action on the part of those who are entrusted with the important duty of managing these popular expositions; and bee-keepers will be derelict in their duty to themselves and fraternity, and exhibit a selfishness worthy of a more ignoble calling, if they do not take the fullest advantage of every generous encouragement, and serve themselves by benefitting the public in making the most of these opportunies. We have no doubt the many tons of honey which will be exhibited at the Michigan State Fair, will be profitably sold before removal from the exhibition building.

A novel feature in the premium list is the mention of a special premium to the lady making the largest and best display of bees and their products. There are several quite successful lady apiarists in Michigan, and we would not be surprised if the special premium stimulated a very spirited competition not only for its capture, but for the sweepstakes also. We have for years had, in the BEE JOURNAL Museum, a section of honey produced by a Michigan lady apiarist, that would not take second rank in any exhibition, though it was one of a lot exposed for sale in a grocery store when we purchased it.

Wax Rendering.

Mr. Phil. Rearden, Jamestown, Col., propounds the following queries:

1. Please publish the best method of making wax from comb? I send you a flower on which bees have been working for 3 weeks, when they would not be found on any other flowers. 2. Can you give us the true name for it?

1. We think the use of the Swiss or Gerster wax extractor is the most economical and satisfactory method of rendering beeswax from combs, leaving the wax pure and of the highest market value, and requiring no especial attention or skill. The primitive method is with the use of the ordinary wash boiler, in which strips of wood, say 1 inch thick and 1½ inches wide are laid across the bottom, to prevent burning; make sacks of coarse strainer-cloth to hold about 1 peck each; warm and press your combs to get them in as small a compass as possible, and fill the sacks; put these in the boiler till it is well filled; place a board on top, with a weight on it to press down as the combs shrink from loss of wax; fill up with hot water and set on the stove. The weight should be heavy enough to submerge itself below the surface of the water, and the latter should be replenished often enough to admit of dipping or skimming off the wax. Many use sal soda in the water when rendering the wax, but we do not like to recommend it, because a trifle too much is very likely to injure the wax, and rob it of its flavor; and we do not know that it assists any in speed.

The second query is answered by Prof. Burrill, of the Illinois Industrial University, as follows:

2. Crane's-bill or spotted geranium (*Geranium maculatum*). This is a very pretty and interesting plant, common throughout the northwest in woods and fields, but rare in New England. The thickened root is very astringent, and is collected for domestic medicine, and is, I believe, used by the physicians to some extent. The common name comes from the peculiar appearance of the fruit, which consists of five parts adherent to a peculiar elongation of the axis of the stem. At maturity these one-seeded parts separate elastically from the base, curling outward with a snap so as to throw the seed to some distance. There are ten stamens, five of which are longer than their brothers, and each has a honey-gland at its base, supplying a rich amount of nectar for the bees. The plant is worthy of cultivation in several respects.

The Weather for August and September.—Vennor gives the following as the forecast for this and next month:

August will be another month of storms and unusual rainfall with one or two remarkably low curves of temperature. I expect snowfalls will be recorded in extreme western and northwestern sections, and cold rains at more southerly stations shortly after the middle of the month. October will be very similar, but of course colder.

September is likely to be the counter-balancing month of this most unpropitious season, and during this month everything should be done that can be, to house things safely against further wet and storm.

In the Middle and Northern United States and Canada, the weather is also likely to continue wet up to a late period, but two or more wintry belts of weather with snow-falls, are likely to be experienced in the latter portion of October and in November, after which rain will again set in. At New York the autumn will be very wet. In the Northwest early cold and advanced snow-falls are likely to be the conditions, while in December the cold may be intense.

Glucose or "Sugar" Meal.

Mr. George Thompson, St. Charles, Ill., sends us the following excellent extract from the Marengo *Republican:*

> By the stench that arises from the "sugar meal"—refuse from glucose—which is being fed quite freely by some of the dairymen hereabouts, one might think that such stuff would make very poor milk and butter. And it does; it is one of the worst forms of food adulteration—injurious alike to the cows and those who use their products. Some cheese and butter factories will not use milk from cows that are fed with the stuff. No factory should. It is just as bad as oleomargerine, suine, or any other form of bogus butter. And then the dairy cows when worn out are brought to the butcher's block and cut up for meat. Such meat is just as deleterious as an article of food as the butter. With such refuse entering into the milk, butter and meat that people use, is it any wonder that scrofula, cancer, paralysis and kindred diseases, rage among the people, who, thoughtlessly perhaps, hold their breath and inquire, "What is the cause of so much disease?" It may not all lie at the door of "sugar meal," but it is a most fruitful source, and dairymen will sooner or later learn that it is very unprofitable stuff in every respect.

The *Republican* makes a most excellent and truthful point in its reference to the poisoning of the flesh which is sold in market from the cattle that are fed on the glucose refuse meal. If the cheese will "rot down in thirty days," from the impurities in the milk, is it not reasonable to suppose those impurities will more or less permeate the flesh, and cause therein a latent poison, to be taken up and developed by the human system, to the extent of destroying life itself? When the trichina became an alarming feature in the consumption of pork, thousands of persons abstained from its use, and substituted the greater use of beef therefor, supposing that the latter indeed would be free from disease, and, as a consequence, beef appreciated in value, and to a very large extent superseded the domestic use of pork; but where can we turn for a substitute for beef, if farmers and dairymen will persist in feeding glucose meal? So that every phase of the glucose traffic is a pernicious fraud, and everything should be condemned into which it enters—the poisoned sugar, poisoned syrup, poisoned honey, poisoned milk, poisoned, rotten cheese, poisoned beef, and everything else where it affords a profitable field for substitution and fraud.

Wise Precaution.—There is a strong tendency among the people of this country to be led astray by novelties and pretentions advertisements of fortunes to be obtained without giving an equivalent. Many papers nowa-days contain more or less advertisements for some new and superior variety of vegetable, fruit, or berry, and a limited number of seeds, plants or cuttings to be sold at extortionate prices. In fact, one is led to believe that the great aim is to obtain something new, on which to assume a great number of superior features, trusting to the credulity of the public to make profitable sales. As indirectly bearing upon this subject the *Rural Canadian* says:

> The eminent and venerable pomologist, Charles Downing, does not consider it safe to give a decided opinion on any new strawberry or raspberry short of five years' trial. If all were similarly cautions, much money would be saved in the purchase of untested novelties.

We have no doubt that there are many varieties of corn, potatoes, cabbages, and, possibly, almost every species of fruit, grain and vegetables, which would be benefitted by having the same extended test applied.

☞ We have just received a letter addressed "T. C. Newman, Chicago, Ill.," enclosing a post office money order for subscription to the BEE JOURNAL. In a city like Chicago, there are several hundred persons bearing the name Newman, and unless great care is used, valuable letters are lost, and correspondents frequently blame us, when the fault is all their own. In the case referred to above, the letter was wrongly delivered by the postman, and the party to whom it was addressed sent it to us. Unless positive about our name, address your letters to the "AMERICAN BEE JOURNAL, Chicago, Ill.," when we will get it without delay, as there is no other paper of that name in this city.

☞ We have received, too late for insertion this week, an article entitled "Queen Shipping Cages," from W. Z. Hutchinson, Rogersville, Mich.; also one of the cages described, containing an untested queen and 10 workers. The article will appear next week, with comments.

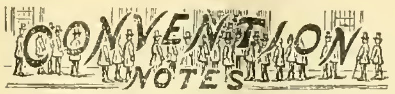
☞ Articles for publication must be written on a separate piece of paper from items of business.

British Honey Shows.—The British Bee-Keepers' Association held its annual metropolitan Show of bees, hives, honey, etc., during the first week of this month. We have news only up to the day of opening, Aug. 3d, when about 300 entries had been made. The Exhibition Committee have arranged to conduct an examination of candidates who are desirous of gaining certificates of proficiency in the art of bee-keeping. Eighteen candidates have entered for such an examination, among the number being several schoolmasters.

The Show of the Berks and Bucks Association was held at Buckingham, on Tuesday, the 25th of July, in connection with the Show of the Horticultural Society. A remarkably fine day, together with the numerous attractions of the flowers, vegetables, dead poultry, eggs, fruit, hives, honey, bee-driving, etc., drew together a large concourse, not only of the middle and lower classes, but of the nobility and gentry of the town and county, the clergy being especially conspicuous by their numbers. The prizes were numerous, and included hives, bees, honey, and public manipulations with bees.

☞ A Colorado correspondent wishes to know how he can dispose of a fertile worker and save the colony? Remove the hive from its present stand and put an empty one in its place; take out a comb from the colony, shake and brush all the bees off, cage a mated queen on it, and put it in the empty hive on the old stand; now shake and brush all the bees from the combs, successively, on the ground 3 or 4 feet in front of the hive on the old stand, and fast as clean put the combs in the same hive with the queen. Leave the queen caged with plenty of feed for 48 hours, then release her.

☞ On referring to our letter department, it will be observed Mr. A. B. Mason urges upon bee-keepers the importance of making early entries at the Tri-State (Ohio, Michigan and Indiana) Fair, to be held in Toledo in September. The enterprise of this Fair Association is worthy of a liberal support from bee-keepers, more especially as the managers propose to erect additional buildings for our accommodation. There should be no dilly-dallying in the matter, but make the entries liberally and promptly Mr. Mason will give all the information that may be desired.



Local Convention Directory.

1882. *Time and Place of Meeting.*

Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.

19—Michigan Central, at Lansing, Mich.
E. N. Wood, Sec.

26, 27—Kentucky State, at Louisville, Ky.
W. Williamson, Sec., Lexington, Ky.

Oct. 3-6—North American, at Cincinnati, O.
Dr. Ehrick Parmly, Sec., New York City.

5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky,

Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.

Nov. 1—New Jersey & Eastern, at New Brunswick.
J. Hasbrouck, Sec., Bound Brook, N. J.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Norfolk, Ontario, Association.

The fifth regular meeting of the above Association, was held at Simcoe on the 4th inst. There was a goodly number present, though not as many as at some of the previous meetings, which, undoubtedly, was the result of many of the members being engaged in harvesting.

The meeting was rather an interesting one, for there were a number of resolutions passed, that put the Association in good working condition; and there were several experienced bee-keepers present, who enlivened discussions. The Association passed a resolution to put forth their best effort toward making a display at the next exhibition of the Townsend Agricultural Society, to be held at Waterford, on the 28th and 29th of September, the above Society kindly agreeing to establish an Apiarian Department, and offer suitable prizes. This seems a move in the right direction, and we congratulate the above Society on its early acknowledgment of the importance of apiculture.

The Association now has 46 members, with a fair prospect of large additions. The next regular meeting will be held in the Town Hall at Waterford on Thursday, Sept. 28th, at 2 p. m. Elias Clouse, *Sec'y.*

The National Convention.

The following is the official call of the Secretary, Dr. Parmly, for the Convention of the North American Bee-Keepers' Society. We hope there will be a large attendance:

The North American Bee-Keepers' Society will hold their 13th annual meeting at Washington Park Hall, Cincinnati, O., across Washington Park from the Exposition building. Time, Oct. 3rd to 5th, 1882. First session Tuesday, 10 a. m., Oct. 3. We are encouraged to hope that this will be a very profitable meeting, as we are promised papers from, and the presence of, a large number of our most prominent bee-keepers both in the United States and Canada, and essays and implements of the apiary are expected from abroad to add to the knowledge imparted by the research and inventive skill and methods of our countrymen.

Ehrick Parmly, *Sec.*
New York, July 12, 1882.

☞ The Central Michigan Bee-Keepers' Association will meet Sept. 19th, at Lansing, in the Capitol Building. We call the meeting two weeks before the Annual Fair of the Central Michigan Agricultural Society meets, for the purpose of making the final arrangements for a large exhibit of bees, honey and apiarian supplies. A cordial invitation is extended to bee-keepers everywhere. The meeting will be of especial interest, and a large attendance is expected.

E. N. Wood, *Sec.*

☞ The Kentucky State Bee-Keepers' Convention will meet in Louisville, Ky., at the Exposition Building Press Rooms, on Tuesday and Wednesday, Sept. 26th and 27th. All bee-keepers are invited to attend, and send essays, papers, implements, or anything of interest to the fraternity. The Exposition will be in full blast and cheap. Railroad rates from all points. W. Williamson, *Sec.*

AMONG OUR EXCHANGES

MISCELLANEOUS.

Care of Comb Honey.—Mr. W. M. Kellogg, in the *Prairie Farmer* gives advice as follows:

The season of 1882 has been a bountiful one for the bee-keepers generally, though some claim only an average crop. But for those of us who have been successful (I will not say lucky) in getting a good yield of beautiful honey, it is well to look to its storage, so as not to lose all our hard earned sweets.

Many will dispose of their crop at once, and others will keep a part or whole of it for some time. It is a rare thing to find a colony of bees that does not at some part of the season have now and then a moth to lay a few eggs. In taking off comb honey, we many times also take along with it a few eggs of the moth stored in unnoticed nooks and corners. These soon hatch, and if we happen to be a bit careless as to looking after our honey, when we do go to get some, we very likely find our nice comb all tunneled with little fine webs, and completely ruined. To avoid this, we must watch our honey closely, and as soon as we see the very first signs of any moth-eating of the combs, give the entire lot a smoking with burning brimstone.

Place the honey in a large box, or small room; up a little way from the bottom of the box or room, put in a live coal in an iron dish, dump on a few spoonfuls of sulphur, and get out of the way or your nose may catch it. This should be repeated every few days till you are sure you have settled the affairs of all the hatched moth worms, for mind you, it don't kill the eggs to smoke them.

The smoke, unless too close and hot will not injure the honey, will soon evaporate, and tend to whiten the comb still more. We should keep our honey also, so that no new moth eggs can be laid in it. Clean off all the little bits of comb and propolis on the section so that you need not be ashamed to hand over your product to the most stylish customer.

Again many seem to think that honey can be stored any where as regards the place, upstairs or down cellar. Dampness will spoil honey in a short time, either comb or extracted, causing it to sour and foam. the comb honey bursting its caps and running down in a fearful mess. All honey should be kept where it is perfectly dry, if we would keep it in prime order. Not one cellar in a thousand is dry enough to store honey in.

Bees Blotting out Railway Signal Light.—The *British Bee Journal* says: We have been favored with a copy of a report on the above subject, which will, doubtless, be read with interest. It is as follows:

I have to report that the light of the down distant signal, working from Barton and Walton Station, was last night, at about 8.30, put out by a swarm of bees which had entered the outer case of the lamp through the ventilation at the bottom, and also smothering the inner petroleum case that prevented the air from getting to it, hence the cause of the light going out. The outer case was so full of bees that it was impossible for any more to get in, as every hole at the bottom of the lamp had bees which had forced themselves half way through, and it was impossible for them to get any further owing to so many being inside. The outer case was also smothered over outside with bees, which made it a very difficult task to drive them away so that the lamp might be relighted. A greater part of the bees inside we found dead, owing, no doubt, to the smoke and smell from the petroleum. I herewith inclose you two or three hundred, which prove that the bees had not been burned, but merely smothered.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ When changing a postoffice address, mention the *old* as well as the new address.

CORRESPONDENCE

For the American Bee Journal.

Reversible Frames, etc.—A Visit.

G. W. DEMAREE.

The 3d of August found me at Eminence, Ky., where some business matters required my presence. Having to wait for the evening train to return home, I improved the time by visiting the man of "reversible" frames, bees and plants—the well-known apiarist, W. T. Stewart, of Eminence, Ky. I found Mr. Stewart sitting in front of his photograph gallery perusing a copy of the AMERICAN BEE JOURNAL, right fresh from the mail bags. The old-fashioned hand-shaking that followed will certainly be pleasantly remembered by me. Dr. Ed. Drane, President of the Union Bee-Keepers' Association was sent for, and soon joined us, and now having that high functionary present, we went into a "Committee of the whole" on the "state" of the present, or rather past honey season. Mr. Stewart reported that he had not been favored with a single "bait" of honey this season, but still had sanguine hopes. He said the season had been contrary all along, and he would not be surprised if it did not take a turn and still be contrary, and give us a flow of honey in August.

Dr. E. Drane "really" did not expect much honey this year, therefore, he went in mostly for "increase," especially as next year is "bound to be a splendid honey season." The Secretary (that's me) had "slung out" about as much honey as he fed syrup to stimulate last spring, but it was "awful thin," and tasted decidedly "weedish." Dr. Drane thought the Secretary had "glucosed" his honey to make it go further. Mr. Stewart suggested that the bees, in their extremity, had licked up the honey and left the Secretary the water pure and simple.

The contents of the last issue of the BEE JOURNAL were examined to see if any "fault could be found with it." Dr. Drane took some of the stock of those drones which Mr. Carroll (page 490) saw "working the wax; yes, building comb." The doctor said that he was acquainted with Mr. Carroll, and that he is reliable; he wanted the drones. Mr. Stewart insisted that "drones don't do anything—*emphatically*, they don't."

At this juncture, the bell rang for dinner, and I "demurred," but Mr. Stewart "overruled." It is a real pleasure to be entertained by so noble a pair as Mr. Stewart and his estimable lady. Mrs. Stewart, who enjoys a good joke, says that her liege lord ought to store away "900 lbs. of honey for his own use," and I did not think her extravagant, after seeing him "get away" with things at the table. After dinner we repaired to the apiary to discuss reversible frames, bees and honey plants.

Mr. Stewart's frame is reversible, and no mistake. It is an exceedingly ingenious contrivance, presenting the novel feature of being a fixed and a movable frame, at the will of the operator. Such a frame would be very convenient to those who keep bees on the migratory plan; but just why anybody should ever have reasons to turn the brood-nest topsy-turvy I imagine that no one knoweth.

Such a collection of bee plants I presume was never seen on one small tract of land, as may be seen surrounding Mr. Stewart's apiary. From the huge sunflower down to the little feeble creeper, with its wee bit of blossoms, can be seen there. It is a pleasure to see the yellow bees tugging at the figwort, motherwort, catnip, sweet clover, milkweed, and a list too long to be mentioned here. Mr. Stewart and Dr. Drane are exceedingly partial to the Italian. The former was once a student of the latter, and they agree amazingly well. I accuse them of letting their prejudice get the advantage of their usually good judgment, when they condemn so unsparingly the "new races" of bees without giving them a fair trial. It is not generally known that the Doctor is the identical "able bee manipulator," on whom Col. Nall, of the *Farmers' Home Journal*, got off that tough joke about a colony of Cyprians "flaxing him out," taking possession of a hole in the crown of his hat, and utilizing another hole in the unmentionable part of his pantaloons. The Doctor now lavishes his affections on the gentle Italians.

By the way, these well-informed bee culturists have a fancy for nice bees, and spare no pains or expense to improve their stock. They take much the same grounds that I have taken in my published article concerning the Italian race. They admit that "high grade" stock—borrowing the term from Kentucky short-horn breeders—such as many of the dealers and breeders are now "writing up" and selling under the flexible nomenclature of "dark" or "leather-colored" Italians, make good, profitable workers, but they would no sooner be found breeding from such stock than a short-horn breeder would be found breeding from "high grade," instead of thoroughbred stock. Every intelligent breeder knows that it is simply impossible to keep up "high grade" stock by breeding from "high grades," because the tendency is downward, as long experience has proven. If time shall prove that high grade stock is most profitable, why, still pure blood on one side of the parentage will be essential to success. As for myself, I have lost much confidence in the ability of the present generation of apiarists to perfect a satisfactory strain of bees possessing all the good qualities desired. There is no concert of action; too much diversity of opinion, and, perhaps, some selfishness. All these things are in the way of success.

The 7th of August is here, and we have no surplus honey. There has not been so complete a failure in 20 years. Time and again have our bees entered the surplus apartments of the hives, as though they were about to reap a bountiful harvest, but the work had scarcely begun, when it was abruptly brought to an end by bad weather. We had some nice days between the 20th and 28th of July, and things began to look flattering, even at that late date, but there was a change for the worse, and since then it has rained nearly every day, and some days two or three times. I simply report these things as facts. We, who accept an overruling Providence, and are able to bear adversity, because we know that all things will work out for the best by-and-by. No grave is deep enough to bury our hopes. "So mote it be."

Christiansburg, Ky.

For the American Bee Journal.

My Strain of Leather-Colored Bees.

JAMES HEDDEN.

I have written some about my strain of leather-colored bees, crosses between the long Italians and brown German bees; I have also sent you one queen that not only produces such bees, but bees that are gentle to handle, and will surpass any bright Italians as honey-gatherers, as far as my experience goes. Look at her carefully; she is not large, but she lays largely, and her workers are large and long, and work on red clover as freely as on the white.

Last year most all sorts of bees worked on red clover more or less, but this season the weather has been favorable for a long growth of the honey-tubes, and yet nearly every colony in my apiary are at work on both first and second crops of red clover—the mammoth red clover as well as the smaller variety. Basswood is now over, and yet there is no robbing nor stinging in our apiary of 275 colonies. The work on red clover is the cause.

All this is the effect of 6 years' breeding for business, instead of bands. In this locality there are many other flowers besides red clover, that have tubes that strain the bees to reach. No one can breed from the best honey-gathering colonies without lengthening the proboscis of the worker, whether he aims at this point, or knows he is doing so, or not. As I stood in a patch of mammoth red clover yesterday, and counted four of these dark, leather-colored Italians on the heads of one stalk of first growth, slowly drawing in the long draughts of nectar. I said to myself: "Verily, for my new departure I am reaping my reward; our 10,000 lbs. of comb honey, in 1 lb. sections, now so nearly finished, will soon be nicely sealed." I did not ask to be forgiven for feeling jubilant over my success. This success is not at the expense of any one's failure, but *vice versa*. A bountiful crop blesses both the producer and the consumer. Right in the midst of my pleasant reverie came thoughts of the arguments of those who stickle for the bright Italians, with just 3 gold rings (they are growing less I see), and I wished I could have had them, and the editor and readers of the BEE JOURNAL with me, to see and decide each for himself. I have done all I could for one of the number, by sending the BEE JOURNAL a queen for inspection and test. Tell us your judgment of her and the progeny when fully tested. She is, in my opinion, of too much value to be subjected to the abuse of a mail-bag, or be thrown about in the sun or frost, as often happens. So I sent her by express, paid, and feel that you will do your whole share if you find her a place, test her, and report to us all.

Dowagiac, Mich.

[We acknowledged receipt of the queen last week, and hope next season to be able to report how we find her progeny, without partiality or prejudice. We have often said the best bees will be found to possess the best colors, whether yellow, brown or black.—ED.]

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For the American Bee Journal.

A Crumb for the Curious.

EUGENE SECOR.

Bee books tell us that in about 8 days after the first swarm issues, we may expect to hear the "piping" of the queen, if the colony contemplates sending out an after-swarm. As an exception to this rule, and as something outside of my previous experience and knowledge, I hereby record the fact of the piping of young queens before any swarm issued. It happened in this way: July 26th one of my colonies sent off a swarm which was returned to the parent hive and an additional story added, hoping to cure the swarming fever. I supposed I had accomplished it, as they went to work vigorously.

Aug. 4th, as I happened to be near the hive, I distinctly heard the piping of two or three queens. That was contrary to my bee knowledge, except on the theory that the old queen had died. Next morning I thoroughly searched the brood chamber, and found the old queen present, eggs and brood in all stages, as in any prosperous colony. This circumstance tended to confirm the theory that the swarming impulse is controlled entirely by the workers; that they were determined to drive out the old queen and a swarm, and had been guarding the queen cells for that purpose. It was a strong colony. I extracted the honey from the second story, took off part of the boxes from one set over the upper story, which were filled, took several combs of brood out of the lower story, and hope they are now "controlled" for the season.

The season here has been only "fair." The first part of the summer gave no surplus, but as bees are now "booming," and as August is one of our best honey months, we yet hope to get a reasonable surplus. Basswood gave no honey, nor the first crop of white clover. Sumac is a good honey plant here, and yielded bountifully. The fall flowers are now coming on grandly. Goldenrod, wild asters, artichokes, thistles, wild primrose, Spanishneedles, and various other honey plants are abundant here every fall, and yield nectar till frost comes.

Forest City, Iowa, Aug. 7, 1882.

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For the American Bee Journal.

Mr. Abbott on Bee Excretions.

WM. F. CLARKE.

Personally, and on behalf of the bee-keeping fraternity on this side of "the great fish-pond," I thank our distinguished fellow apiarist, Mr. Abbott, for his interesting article on the excreta of bees, in the AMERICAN BEE JOURNAL of July 26th. Its only faults are excess of brevity, and of modesty. Mr. A., not having brought all his arguments to bear at once, we do not yet know how strong a case he may be able to make out. His great modesty, while an excellent example to all of us, is hardly necessary in view of his eminence as an apiarist. He is too "sound on his pins" to be in any great danger of being "tripped."

The main object of this communication is to draw out a fuller statement from Mr. Abbott on a subject which he seems to have studied very thoroughly. Its secondary object is to explain on a point or two in regard to which my article, on which he has been kind enough to comment, is not, perhaps, quite so explicit and clear as it might be.

As I understand Mr. Abbott, he considers that bees imprisoned for a short time under the circumstances he describes, will void dry excreta. The circumstances are those of confinement in a clean, new box, of small dimensions, and, if I am not wrong, destitute of comb. A longer confinement, say 24 hours, in a hive supplied as usual with comb, a railway journey being taken by the bees during the time specified will result in the development of "dysenteric symptoms."

During the briefer journey, I take it, the normal state of things is not sufficiently disturbed to cause "dysenteric symptoms." Moreover, if I am right in supposing the bees to be without combs, they would fast during this briefer journey. Instead of clinging to the combs, they would form chains and clusters, which would probably result in greater quiescence.

During the longer journey, they would undergo more excitement through protracted confinement; would perhaps over-load their stomachs with honey, with which we know they are apt to fill themselves during a disturbance of their natural quiet; and would, probably, run hither and thither over the combs, worrying and wearying themselves. All this would naturally tend to cause "dysenteric symptoms." And these would the sooner appear because they had fed, more or less, on thin honey, whose watery nature would be likelier to produce this result than thick, old honey. Might we be warranted in thinking that this thin, unevaporated honey is akin to grass in the case of bovine animals, and the thick, old honey, similar to hay? If so, it would not be surprising if the summer excretions of bees were, like those of cattle, much looser than those voided in winter. The habits of bees in this regard during the summer season are not wholly matters of curiosity, as they throw light on the great question of wintering. Would Mr. Abbott kindly tell us if his experiments have led him to believe that in a healthy state, bees always void dry feces? The brief journey experiment would seem to indicate this. Yet I would not be surprised if it were otherwise, and if, during the active season, when honey, fresh from the flowers, is their constant food, their "bowels" were more "open," if one may use a human phrase, and they were in a state akin to that of mankind during the season in which vegetables and fruits are freely used.

Mr. Abbott says: "My stand-point is: Bees can only void their excreta naturally when on the wing." I do not quote this statement to combat it, though I should prefer to put it somewhat differently. I would say, this is their ordinary way of voiding their excreta. Mr. Abbott says, they void dry feces during a short railway journey such as he has described, and I presume from the statement of his stand-point, that he considers they do this when on the wing to that extent which the box permits, or else, he must mean that confinement forces them to an unnatural voiding of excreta. Colonies of bees that winter well, strew the bottom boards of their hives with the dry, brown, powdery atoms which I and others, including I presume Mr. Abbott himself, regard as excreta. At this time, they undergo protracted imprisonment, and are confined to their combs. So far their conditions are like those of the longer railway journey. But it is winter, and the bees are in quietude. There are different conditions; yet they void their excreta. They cannot get on the wing, and Mr. Abbott's stand-point is that only when on the wing can they perform this function naturally. I suppose he would say that winter confinement for so long a time as compels this voiding of excreta is an unnatural state of things. But to take this ground is virtually to assume that bees are intended to be natives only of such climes as admit of their taking wing "all the year round." Is this correct? Have we not reason to think that if we only understood the conditions required to winter them well in cold climates, they would be just as much at home in the higher as in the lower latitudes, within, of course, a certain limit? If so, then, while voiding excreta during flight is their usual habit, nature may have provided for their residence in cold climes, a way of relieving themselves which is not dependent on "the muscles that give the power of flying." I will not say that this is my "stand-point," but with my present lights, it is the view I am inclined to take. Will Mr. Abbott kindly give us his views on this point?

Some bee-keepers take the ground that bees during winter retain their feces; that owing to their eating little, and that of highly concentrated food, their excreta during the winter season are comparatively inconsiderable; but that they accumulate, so as to be a source of discomfort, and render a "purifying flight" in mid-winter desirable. I do not agree with his theory, and while I would avoid dogmatism on a subject concerning which we are so much in the dark, would put forth this hypothesis: That nature has provided a secondary and supplemental mode of discharging excreta when flight is impossible, and that this is in the form of dry feces, which do not befoul a hive that is free from superabundant moisture. It is worthy of mention here, that some of our best bee-keepers, *e. g.*, Mr. Gallup and Mr. L. C. Root, have testified that bees which have gone through a long, hard winter satisfactorily, do not befoul the snow that may be lying on the ground, when they are liberated for their first flight in early spring. If this be so, then the discharge of dry feces during close confinement, must satisfy the calls of nature sufficiently, and it may be that a flight in mid-winter or early spring is not absolutely necessary for purifying purposes. Still, it is doubtless a relief and pleasure to stretch their wings, and get some out-door exercise once more.

This then, brings me to my statement, "I do not believe with Mr. Abbott, that 'protracted confinement' produces 'dysenteric symptoms,' *if the bees are in such a state that they can void dry excreta.*" I have italicised the latter part of this statement, because I wish to call special attention to what it involves. It is of so much importance, that I ought to have been more full and explicit in regard to it. I think it is not so much out of harmony with Mr. Abbott's views after all, if I had made it clearer, and he had taken in its entire significance. During the briefer journey he describes, the bees are in a state in which they can void dry excreta. They are not confined long, they do not gorge themselves with food, and they are not subjected to very severe excitement. But, during the longer journey, they are in a very different state. They have a more protracted confinement, they have access to combs full of honey and pollen, of which they are tempted to take too large quantities, and they are greatly shaken up and excited.

The desirable state for bees to be in during winter is one of comparative quiescence. They become semi-torpid, eat very little, are almost motionless, and perhaps drowse, or sleep. Like certain animals, they "hibernate." If they can be kept in this condition, I think they can and do void dry excreta. This is what I meant by saying, "when we have described the condition under which bees discharge dry feces only, we shall have solved the problem of successful wintering." I am glad to have Mr. Abbott say, "to this I in a measure agree." He adds, "in the meantime, I claim to have discovered one of those conditions." It is doubtless obtuseness in me, but though it involves a confession of stupidity on my part, I must own that I don't clearly comprehend what that "one condition" is, except it be the small liberty of flight which a box destitute of combs gives. Will Mr. Abbott kindly explain more fully what that "one condition" is? I have read his article over and over again, without being able to come to a thoroughly satisfactory conclusion about it.

When I expressed dissent from Mr. Abbott's opinion that "protracted confinement" produces "dysenteric symptoms," I had in my mind's eye the fact that bees often endure a whole winter's imprisonment without any trace of dysentery showing itself in the hive. Perhaps, however, the protractedness is only a question of time, and that, at length, the bees must come to what Mr. Abbott thinks their only natural way of voiding excreta, or, as I would rather term it, the usual and primary way of doing it.

Mr. Abbott thinks it possible that "twice 24 days' quiet confinement through stress of weather in a hive 'well found,' might, under certain circumstances, be talked of as a nice time of natural rest for bees." Well, our best bee-keepers in the more northerly part of North America, are wrestling with the problem how to winter their bees during five times 30 days of "quiet confinement through stress of weather," and, if our worthy friend across the water can help us manage matters in such a way as to talk of this long period as a "nice time of natural rest for the bees," we shall be everlastingly obliged to him.

Listowel, Ont., July 29, 1882.

For the American Bee Journal.

Bee-Keeping in Belleville, Ontario.

REV. W. K. BURR, M. A.,
Editor of Ontario Hornet.

With Mr. Heddon I may say that it is my part, too, "to feast on ideas in print." I have certainly been very much delighted with the many useful ideas contained in the justly valuable BEE JOURNAL. A brighter day is truly dawning for the apiculturist. New fields of investigation are continually opening. Men of eminent ability and capability are engaged in the work, not only in the discussion, but in the actual experiments which lead to the summit of success.

Dreamers never reach the summit,
Doers win the prize at last;
Dreamers sometimes seek to gain it,
But their chances soon are past.

Men, to succeed well in the apiary, must be men of energy and perseverance; they must examine their work in all its bearing; view it from different standpoints, and learn how to obtain the best results.

I agree with Dr. Baker, that drones are of use, but the term as applied to people (meaning idlers), this is what we should labor to avoid. There are, doubtless, a great many that keep bees that are too indolent to think, much less to study the works on bee lore, and learn theoretically the successful management of the apiary. Very few in this part of Ontario have, until recently, taken any interest in bee lore; but the prospects for improvement are brightening. The BEE JOURNAL circulates here, and will doubtless do much in educating many who are now only keeping a few colonies of bees. I intend, when the busy season arrives, to endeavor to extend its circulation, and trust I may be able to send you a long list of subscribers.

Belleville, Ont., Aug. 7, 1882.

For the American Bee Journal.

Humor Practically Applied.

MRS. C. J. ALLISON.

"Who shall decide when doctors disagree?" is a mooted question; but it is an admitted fact, that on all questions pertaining to apiculture, especially weedy ones, the BEE JOURNAL settles them. We have learned so much from the failures as well as successes of others (*we*, that is Jeems and myself) we will give you some of ours.

As we had to feed our 15 colonies last season from the 20th of July to the last of August, we concluded not to divide much this year, so we only increased to 24 by swarming, and dividing and nuclei, and most of them had been doing splendidly, storing honey in the second set of boxes (American), when the swarming fever came over them, two swarms at a time—three absconding, this week, to our knowledge. I think we should have divided. However, we are but novices of only two summers' experience, hardly in the A B C yet (don't know as much as we did a year ago). Well, we went over the rest of them, cutting out their queen cells and giving two frames of foundation to keep their queen busy; but work seems suspended where they have issued. I intend next year to have them all divided and in working order by the middle of June.

We have an abundance of fall bloom, such as asters, goldenrod, smartweed, and old fields are blue with a weed called square-plant, also blue vervain, and a host of others. For 30 years I have had the black flag raised against weeds, and I am now hunting for them as so many greenbacks. Even the nasty Jamestown weed don't look quite as hideous, since I saw bees at work on it. I find my early education has been sadly neglected—why not take up the study of Botany now? It is said, Humboldt took up new studies after he was 80 years old.

What a lazy race we Americans are. The fact is, the great bread-and-butter question absorbs soul and body of most of us, and my ambition the last 2 years has been to have a *leetle* honey on that bread. So last spring, to make a success, we sent for seeds of catnip, mignonette, cleome, motherwort, spider plant, figwort, dandelion, sweet, white and Aliske clovers. Well, I tried to weed those beds out between showers, and at last concluded I didn't care so *very* much for honey; preferred sorghum. So when the weeds were as high as my head, Jeems had the pleasure of cutting them down with a scythe; but we think the clovers pay. We have half an acre of sweet clover, sowed a year ago last spring. In the fall and last spring it was just the thing for calves. As we have four hundred acres of land, most of it under cultivation, we have to look out for other live stock besides bees. Bees are only a side show for pastime, and to raise a little money to pay taxes on the land.

Do you pay a premium to the one who sends most weeds? I send you a few. The one labeled No. 1 we got of an old country doctor who keeps bees, (don't believe in bee papers or books). He called it burrvine, also, squareplant and bees work on it from June 1st. It is a fever plant, prized highly for its medicinal properties. No. 2 covers the fields, and is called squareplant, also vervain; No. 3 is squareplant; No. 4 is wild beet, my silver nectarine. We have not learned yet the figwort or Simpson honey plant. No one knows anything by those names; we want that, and spiderplant, and motherwort, and I think with the clovers we will be fixed. I have read a good many cook books, but I think the "Manual" will be the book for me.

I nearly forgot to tell you about a little experiment. We had two nuclei which were made up with queen cells 6 or 7 weeks, when about discouraged looking the combs over for her ladyship and eggs, I at last discovered eggs. I thought they were all right, but alas! they were pouched out into drone cells. One morning while looking one of them over, I found in a new comb half a dozen eggs in a cell; while studying what to do with the nuisance, a swarm came out, so we just poured them down in front of the hive, and in a couple of hours they were at work in the boxes. In the afternoon another swarm came out, so we put them in the other hive, but they quarreled some, and next morning absconded. I had inserted a queen cell in the last one a day before. Would that make the difference? This occurred a week ago. I examined the hive yesterday and found the queen cell still there. Well, forbearance ceased to be human nature, so I slashed it off and found dead larvæ. I gave them a couple of queen cells from a colony just swarmed. You see our apiary is run on the happy-go-lucky system, every one doing that which is good in her or his eyes. In my next I will tell you how that swarm panned out.

Noble, Ill.

[The plant you sent numbered 1, is motherwort, and is of considerable value as a medicinal herb, as well as for honey.

Putting the queen cell in the nucleus would make no difference in regard to the swarm remaining. The trouble, we think, was internal, *i. e.*, the bees in the nucleus had developed several fertile workers, and the bees swarmed out again to save the life of their queen, as the mated queen and fertile workers would not all be tolerated in the same colony. The fertile-worker theory also accounts for the chrysalis dying in the queen cell which you afterward slashed off. The bees, in view of the presence of fertile workers neglected the cell, the embryo queen chilled and died, and the bees were satisfied and did not destroy the cell. We tried a similar experiment this season with a medium Syrian colony in which many fertile workers were developed, except that we caged the swarm-queen on one of the combs in the Syrian colony, then enlarged the entrance to its fullest extent, emptied the bees of the swarm in front, and encouraged them to enter the hive as rapidly as possible. At the end of 24 hours we liberated the queen, and with the exception of perhaps a score of bees killed (which we supposed to be all fertile workers) there was no further disagreement, and the colony is yet very prosperous. We think, had we not caged the queen when putting in the swarm, she would have been killed or the swarm would have deserted the hive. We are not giving premiums for the best collections of honey plants.—Ed.]

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For the American Bee Journal.

Apis Mellifica Poisoning.

J. E. MOORE.

Being in the "same box" as Mr. Heddon, I felt quite interested in his article in the BEE JOURNAL, "Apis Mellifica—Its Poison." My symptoms, viz: itching of the ears, etc., are precisely as he describes them, only it settles in my eyes.

Last season in the month of August, I had some 40 to 50 queen cells to transfer, which must be done in 3 days, in addition to the other work of the apiary. My eyes had been troubling me some previous to this, and the lids were much inflamed when I had part of the cells transferred, but "business must be attended to," and I persisted in finishing the job. The result was that I was "off duty" for a week with my eyes bandaged part of the time. Three years ago I discarded the use of gloves altogether, and found the more I was stung the less I felt it at the time, but during the season of 1880 I began to feel those symptoms several days after being stung; and now, if I get stung I am sure to have them commencing 3 or 4 days after being stung. I think it poisons the blood, going into the circulation and locating in the weaker organs of the body. The ball of the eyes are not affected, but the upper lids, which at times are much inflamed and swollen so as to almost close the eyes.

I have tried a good many remedies on the eyes and the best one is to dilute essences of peppermint in rainwater, and apply with a linen cloth. I find the use of glasses beneficial, and now always wear them while handling the bees, and using the London smoker.

We have taken 112 two-pound boxes of white honey. This seems like "small potatoes and few in a hill" to one who has taken 103 such from one hive. As we have had fine rains during the past ten days, the prospects are good for the fall crop, provided we do not get early frosts.

Byron, N. Y., Aug. 14, 1882.

* * *

From Knowledge.

The Habits of Honey Ants.

GRANT ALLEN.

The Garden of the Gods in Colorado is a bit of show-scenery of the true American type—a green amphitheater, studded with vast ledges and cliffs of red sandstone, weathered here and there into chimneys or pillars, in which a distorted fancy traces some vague resemblance to the sculptured forms of the Hellenic gods. Hither, a few years since, Dr. McCook, of Philadelphia, went on his way to New Mexico, where he wished to study the habits and manners of a famous, but little-known insect, the honey ant. To his surprise, he accidentally stumbled here upon the very creatures he had set out to find. There are two kinds of entomologists: one kind, now, let us hope, rapidly verging to extinction, sticks a pin through his specimens, mounts them in a cabinet, gives them systematic names, and then considers that he has performed the whole duty of a man and a naturalist; the other kind, now, let us hope, growing more usual every day, goes afield to watch the very life of the creatures themselves at home, and tries to learn their habits and customs in their own native haunts. Dr. McCook belongs to the second class. He forthwith pitched his tent (literally) in the Garden of the Gods, and proceeded to study the honey ants on the spot.

Like many other ants, these little honey-eaters are divided into different castes or classes; for besides the primary division into queens or fertile females, winged ants or males, and workers or neuters, the last-named class is further sub-divided into three castes of majors, minors, and minims or dwarfs. But the special peculiarity which gives so much interest to this species is the fact that it possesses, apparently at least, a fourth caste, that of the honey-bearers, whose abdomen is distended till it is almost spherical by a vast quantity of nectar stored within it. Dr. McCook opened several of the nests, and found these honey-bearers suspended like flies from the ceiling, to which they clung by their legs and appendages. All over the vaulted dome of the ant-hill, these little creatures were clustered in numbers, their yellow bodies pressed tight to the roof, while their big round stomachs hung down behind from the slender waist, perfect globes of translucent tissue, showing the amber honey distinctly through the distended skin. They looked like large white currants, or sweet-water grapes; and as they were actually filled with grape-sugar, the resemblance was really quite as true inside as out.

Where did the honey come from? That was the next question. Everybody knows that ants are very fond of sugar, and they often steal the nectar in flowers which the plant has put there to entice the fertilizing bee. So much damage do they do in this way, that many plants have clothed their stalks with hairs, or sticky glands, on purpose, in order to prevent the ants from creeping up the stem and rifling the nectary. In other cases, however, plants actually lay by honey to allure the ants, when they have anything to gain from their visits, as in the case of those Central American acacias, mentioned by Mr. Belt, which have a nectar-gland on the leaf-stalk to attract certain bellicose ants, which so protect them from the ravages of their leaf-cutting congeners. Of course, everybody has heard, too, how our own species sucks honeydew from the little aphides, or plant-lice, which have often been described as ant-cows. But it is not in either of these ways that the honey-ants get their sugar. Dr. McCook had a little trouble in settling this matter at first, for the honey ants are a nocturnal species, and he had to follow them through the thick scrub, lantern in hand; still, he satisfactorily settled at last that they obtain the nectar from the galls on an oak, where it must simply be exuded as an accidental product of injury. The workers take it home with them, and give it to the honey-bearers, who swallow but do not digest it. They keep it in their crops ready for use, exactly as bees keep it in cells of the honey-comb. When the workers are hungry they caress a honey-bearer with their antennæ, whereupon she presses back a little of the nectar up her throat, and the workers sip it from her mouth. The honey-bearers, in short, have been converted into living honey-jars. They are thus passively useful to the community, for in this curiously-ordered commonwealth, they also serve who only stand and wait.

How could such a strange result as this have been brought about? Dr. McCook, though not himself an avowed evolutionist, has supplied us with facts which seem to suggest the proper answer to this difficult question. He has shown that the rotunds (as he calls them) are not, in all probability, a separate caste, but are merely certain specialized individuals taken at haphazard from the worker-major class. He saw himself in the nests many worker-majors, which seemed at that moment actually in course of transformation into honey-bearers. Now, it is easy enough to understand why these social insects should wish to store up food against emergencies. At all times, the queen, the young female ants, the males, and the grubs or larvæ are entirely dependent upon others for support. Hence, alike among bees and ants, stores of food are habitually laid by, sometimes in the form of honey in combs and bee-bread, as with the hive-bee; sometimes in the form of seeds and grains, as with the harvesting ants. During the winter months or the rainy season, when food fails outdoors, there must be some reservoir at home to meet the demand of the starving community. Under such circumstances, any trick of manner which tended to produce a habit of storing food would be highly useful to the nest as a whole; and, taking nests as units in the struggle for existence, which they really are, those nests which possessed any such trick would survive in seasons when others might perish. So the tendency, once set up, would grow and be strengthened from generation to generation, those ants which stored most food being most likely to tide over bad times, and to hand in their own peculiarities to the other swarms or nests which took origin from them.

A set of primitive ants, living upon the honey of the oak-galls, have no tendency to produce wax, like bees, because their habits with regard to their larvæ do not lead them to make such cells at all. The eggs and grubs simply lie about loose among the chambers of the ant-hill, instead of being confined in regular hexagonal cradles. Hence, the bees' mode of honey-storing is practically impossible for them; they have not the groundwork habit from which it might be developed. But the ants have a crop, or first stomach, in which they store their undigested food, before passing it into the gizzard, exactly as in fowls. When ants come back from feeding, whether on flowers, on aphides, or on galls, their crops are very much distended; and they can bring back the food to their mouths from these distended crops, to supply the grubs and their other helpless dependents in the nest. If, therefore, some of the ants were largely to over-eat themselves, they would be able to feed an exceptionally large number of dependents.

Dr. McCook observed that some very greedy workers, returning to the nest, fastened themselves upon the roof in the same position as the honey-bearers, and, in fact, seemed gradually to grow into rotunds. The other ants would soon learn that such lazy, overgrown creatures were the best to go to for food; and, in time, these gorgers might easily become specialized into a honey-bearing set of insects. The workers would bring them honey, which they would store up and disgorge as needed for the benefit of the rest as a whole. If the honey passed into their gizzards and was digested, they would be a positive dead loss to the community, and so the tendency would soon be eliminated by natural selection, because the nests possessing such workers could not hold their own in bad times against neighboring communities. But as only a very small quantity is ever digested—just as much as is necessary to keep up the sedentary life of such immovable fixtures—the effect is about the same as if the honey were stored in cells of wax. The ants, in fact, utilize the only good vessel or utensil they have at their disposal, the flexible and extensible abdomen of their own comrades.

The greatest difficulty is to understand how the workers first acquired the habit of feeding these lazy members to such repletion; but as all ants "take toll" of one another, this is much less of a crux than it looks at first sight. A very greedy ant, which not only ate much itself while out foraging, but also took toll of all others in the nest, after it was too full to move about readily, would be in a fair way to become a rotund. And as it would thus be performing a useful function for the rest, at the same time that it was gratifying its own epicurean tastes, the habit would soon become fixed and specialized, till at last we should get just such a regular and settled form of honey-storing as we see in this Colorado species. Indeed, another totally distinct type of ant in Australia has arrived at exactly the same device quite separately, as so often happens in nature under similar circumstances. Whatever benefits one creature under any given conditions will also benefit others whose conditions are identical; and thus we often get adaptive resemblances between plants and animals very widely removed from one another in genealogical order.

For the American Bee Journal.

A Few Honey Plants.

L. H. PAMMEL.

This is the time of the year when good honey plants are more needed than any other, for it is in the month of August when the bee-keeper expects to reap the reward of his diligent labors, but should misfortune, or rather negligence be his lot, then he awaits in anticipation of the coming year; but should that prove a failure, he becomes discouraged and abandons bee-keeping. Small honey crops are not always the result of a poor honey year, but are more often due to a want of bee forage. I will describe a few honey plants which bloom during the month of August, that the bee-keeper should plant. I will first mention wild bergamot (*Monarda fistulosa*), which commences blooming about July 25th, and continues 4 weeks. This season it is 2 weeks late. It is an excellent honey plant, and is adapted to the bee-keeper who has only poor, sandy soil, where it thrives best. The honey gathered from this plant is very light and has a strong flavor, though not enough to injure its ready sale. Another excellent quality of this plant is that bees can gather nectar from it at all times of the day.

Another good honey plant I will describe as the hoary vervain (*verbena stricta*). This plant grows abundantly on the barren plains in the west, and blooms during the months of July and August. It has a dense spike of blue flowers, and attains the height of 2 to 4 feet. Of the other plants belonging to the same order, which are good honey plants, I will mention the blue vervain, (*verbena hostata*) and white vervain, both growing on richer soil and attaining the height of 4 feet. They also bloom during the months of July and August. As a third-class of honey plants I will mention butterfly weed or pleurisy root (*Asclepias tuberosa*). It belongs to the order, *Asclepiadaceæ*, milkweed family. Like nearly all the other plants of this order, it has some milky juice, but hardly noticeable. The flowers are a bright orange, and may be distinguished by their stamens and a hood-like, or ear-like appendage rising back of the anthers. As a honey plant I would give the preference to Asclepias tuberosa.

As a further example of the productiveness of honey plants belonging to this order, I need only mention the common milkweed (*Asclepias cornuti*), which is so well known to most bee-keepers that it needs no description.

La Crosse, Wis.

SELECTIONS FROM OUR LETTER BOX

Indian Currant or Coral Berry.—I enclose you a specimen of a shrub that my bees are working on right lively. I never knew bees to work on it before till this season; they are out and at work on this plant by daylight, but it seems about noon that the bees desert it. Please give the botanical name, and if the same is considered a honey plant.

W. T. CLARY, P. M.

Claryville, Ky.

[It is *Symphoricarpus vulgaris*—Indian currant or coral berry, and has been several times noticed in the BEE JOURNAL as a honey plant.—ED.]

Hive Covers.—From the BEE JOURNAL, "Cook's Manual" and "A B C of Bee Culture" I have learned all the theory I have knowledge of, but theory and practice must go together, like faith and works—not much good alone. I think I have done splendidly for a beginning, notwithstanding the cold, backward, wet spring. I had 3 Italian colonies in simplicity hives last winter, and 4 colonies of blacks in box hives. Wintered in cellar without loss. I now have 24 colonies, all heavy enough for winter, 20 of them with Italian queens. I have taken only a little over 100 lbs. of honey, and have about 100 lbs. more in the supers. I was too anxious for increase, consequently have but little honey. I know now what it means when old bee-keepers say, "Keep your colonies strong." It means 8 or 10 combs full of bees both up and down stairs (in supers); it is from such that I get my surplus. My hives have flat covers, but they are not the thing. I have no shade, unless I put them under the apple trees, and am afraid that will hardly do. 1. Will it? Aug. 6th was so hot that two heavy combs in the supers melted down, which makes a bad muss. I ran out of covers and covered a board with zinc, letting it down over the edge. They are water and storm proof. 2. How will it do for heat? When the zinc gets hot I cover with a loose board, which I imagine is cooler than a flat cover. 3. What is the best cover for shade and coolness?

JOHN YODER.

Springfield, Ont., Aug. 14, 1882.

[If your orchard is composed of standard trees, so the morning and evening sun can shine fairly on the hives, and the air have a free circulation around them, it will be as good a place as you can put them.

2. With a comb or gable roof, painted white, it will do, even in the sun, better than a continual shade.

3. Is answered in 1 and 2 above.—ED.]

Shuck's Problem.—The article by Mr. Shuck on "dysenteried nuclei," induced me to add my plank to the bridge which may yet carry us over the "Slough of Despond," dysentery, safely. In July, 1881, after basswood bloom, I made some nuclei early one morning. The evening before being rainy prevented me from making them according to my usual custom at evening. They were made in the usual way, by taking brood, shaking in bees, etc., the entrance to nuclei hives being left open. Two hours after, when the sun shone, there was as clear a case of dysentery as you ever saw in April. Everything near was bespattered. Could 2 hours be called long confinement? Was it pollen? There was none unless introduced with the brood. Is July weather cold enough to have that cause it? Was it moisture? The hive was dry and filled mostly with dry combs. Could they have been starved into dysentery in 2 hours? But, then, there is bacteria, that ghost that no one can describe and so hard to locate or strike a blow at. It may be it was "him." If it was because they had gorged themselves with honey, why do they not always show the same symptoms when forced to fill themselves unnaturally, as in making nuclei, extracting, etc.

Ithaca, Wis. C. A. HATCH.

Queen Cages.—Up to date of this I have had only three queens reported dead this season, and one of these was the result of an accident. I use a small wooden cage with sponge saturated with honey. I like a small cage best, as the queen is less likely to be injured by being thrown against the sides of the cage. Who can show a better record with any other cage? I am experimenting with a cage having a soft rubber lining, to prevent injury to the queen by being thrown around in the mail-bags. I am highly pleased with them so far, and I think I can manufacture them as cheaply as most other cages can be made.

E. A. THOMAS.

Colerain, Mass., Aug. 14, 1882.

Sowing Catnip Seed.—I would like to know the proper time for sowing catnip seeds? I had a very large swarm of bees yesterday, and am expecting another every day. I say let them come; I will give them honey from other hives to winter on. There seems to be a good flow of honey yet; the white clover and catnip are holding out splendidly.

WILLIAM WELLS.

Murrayville, Ill., Aug. 12, 1882.

[We prefer sowing catnip seed in quite early spring, but most any time will do; it requires but little attention.—ED.]

Tri-State Fair.—I wish to say to the bee-keeping fraternity who intend to make an exhibit in the apiarian department, or enter the Traffic Department at the Tri-State Fair in September, that it is very desirable all should make their entries, and apply for space at the very earliest time possible. All the space in the buildings now on the grounds is spoken for, and the Fair Association will erect additional buildings for the bee-keepers' exhibits, and they would like to know about how large to build. Any information will be gladly furnished free on addressing me. My bees are still gathering a surplus of honey, mostly from sweet clover and catnip. I commenced the season with 16 fair and 93 rather weak colonies, mostly hybrids. Now have 69 and nearly a ton of extracted honey. I have just hived a nice large swarm. A. B. MASON.

Wagon Works, O., Aug. 15, 1882.

Late Swarming.—I have 25 colonies now; had 12 in the spring; had one swarm yesterday. The season has not been very favorable here this year for bees. My bees are storing honey now in sections, but not very fast. I do not expect much surplus honey; hives are all well filled with both honey and bees. WM. JENNEY.

Shiloh, Mich., Aug. 15, 1882.

Linden a Failure.—My bees are doing nicely on white clover. Linden bloom is a failure this year, having been killed by the early frosts. Bee-keeping has been "up-hill" work in this vicinity for the past 3 years, and apiarists are nearly discouraged.

CHAS. FOLLETT.

Osage, Iowa. Aug. 7, 1882.

Crops were Never Better.—The heavy rains for the last two weeks have greatly checked the honey flow. To date I have 17,000 lbs. of extracted and 400 lbs. of section honey. Crops were never better.

O. M. BLANTON.

Greenville, Miss., Aug. 10, 1882.

Progressive Transferring.—Mr. Heddon has made it as clear as a whistle. I will candidly admit that his head has been clearer than mine upon this transferring question. Of course, the old queen is laying "all the same," whether she is in the old hive or the new. W. Z. HUTCHINSON.

Rogersville, Mich., Aug. 11, 1882.

In Regard to Swarming.—I often have the question asked me: 1. "What bees go out with the swarm, and what stay in the hive?" *i. e.*, where is the dividing line when bees swarm? I have often asked that question, but cannot obtain a satisfactory answer. 2. Is it known? 3. Who decides the question which bees shall go, and which stay—is it the queen or is it the workers? 4. I wish your opinion of A. E. Manum's hive, as advertised in his circular? He has some 400 of them in use in three apiaries 5 miles apart. Very poor season; neither bees nor honey.

A. P. FLETCHER.
Ludlow, Vt., Aug. 8, 1882.

[1. The old bees go with the swarm, *i. e.*, all those that are able to assist in building up a new colony; of course, there will be more or less field-workers out when the swarm departs, and these remain with the parent colony,

2. Yes; you can decide the matter to your own satisfaction by examining a parent colony immediately after a swarm has issued. You will find comparatively few left in the hive, able to fly, except those actually employed when the emeute takes place.

3. Nature decides the question by spreading the swarming contagion, and it is no unusual occurrence to see hundreds of young bees lying around the alighting-board, on the ground, which had over-estimated their strength and could not fly away. These mostly find their way back into the hive.

4. A. E. Manum gives the dimensions of the frames in his Bristol hive, as 22 inches long by 9½ deep, inside measure, and 12 in number. This really makes it a modified Langstroth frame, and gives about the same upper surface as the standard Langstroth hive. It is a double-wall or chaff hive, having a 3-inch space between the outer and inner walls, which can be filled with chaff, cut straw, shavings, or other packing, for out-door wintering. If not too many complications, and we presume there are not, as Mr. Manum is a very practical man—it is an excellent hive.—ED.]

The Dzierzon Theory.—We commenced to keep bees two years ago, and then our stock consisted of 18 colonies of hybrids, excepting two, which were full Italians. We have now 64 colonies, and all are of the favored variety—Italians; have sold 12 colonies. The 64 now on hand are in fine condition, and ¾ of the queens are young, being reared this summer. We have had a fine flow of honey all the while; plenty for home consumption, and more than a hundred gallons to spare. If the Dzierzon theory be true, why should the markings of the workers so frequently differ; that is, if a black queen should mate with a pure Italian drone, why should they not all show the same number of yellow stripes. M. S. WATERS, M. D.

Bethel, Tenn., Aug. 12, 1882.

[By the Dzierzon theory, the crossing of the queen with a drone of another species or strain will affect the worker or female sex only in the progeny, the drone progeny being just as pure as was the mother; hence, queens reared from a pure queen which has met a black or other drone besides her own strain, will throw mixed drones as well as mixed workers. Thus we will see from a queen whose every appearance, as also whose drone progeny would indicate pure Italian blood, workers of every hue and shade. In other words, that by the laws of parthenogenesis, every queen is fertile, as well as under certain conditions the workers also, to produce male progeny; but that the connection of the queen with a drone is necessary to bring forth worker or female progeny.—ED.]

Rejoinder to Mr. Vandervort.—In reply to Mr. Vandervort's challenge to meet him at the National Convention, he with his roller mill and I with the Given press, to test the speed with which these machines can be made to make their best work, I must certainly decline to accept. First. It may be that I cannot attend. Second. It is much trouble and expense to take a 270 lb. apparatus so far, and having not one cent of cash interest in the press, and not deeming it wise or necessary to pay for being believed, I will leave the field to Mr. Vandervort, with these closing remarks: As a gentleman, my dealings have found Mr. Vandervort unexcelled; as a practical, mechanical expert, I count him second to none of my acquaintance; as a honey-producer and breeder, I hold him in the highest esteem. I have used several different makes of roller mills, and I count his the best I have used, but I count the press principle and its product superior to any and all roller mills known to me. Mr. Vandervort might demonstrate a fact, which I do not deny, that he is a better-skilled operating machinist than I, but that would not change the fact that here, in my house, as bungling as I may be, which lack of mechanical skill was felt by all the machines alike, I could turn off foundation three times as fast with the press as with the best Vandervort mill; yes, much faster and neater than I have ever heard of any one doing with any roller mill. I stated this because it was truth, and because such truths were expected from me once in a while. As my only pecuniary interest rests in the sale of the foundation made on this press (and no one has ever challenged its superiority as far as I know), were I to speak from bias, I would say that "it was with much difficulty that the press made this excellent foundation," thus giving a second reason for deserving patronage. I prefer to be honest, trusting my success to that course. Many presses are now in use. Has not some person one that some roller mill is superior to, either or both in its manipulation and product? We have heard considerable from the other side. JAMES HEDDON.

Dowagiac, Mich.

Mountain Mint.—Please give name of plant enclosed and its value as a bee plant. It grows two feet high, and is a wild plant. The bees seem to work on it all day long. Will it pay to cultivate for the bees? They are not doing so well. They cluster on the outside of the hive, and we do not know the cause. Thought perhaps it was the color the hives are painted. They are a dark brown. Please state whether dark or light hives are the best for them. JOSEPH LEE.

Fallston, Md., Aug. 13, 1882.

[The plant is basil or mountain mint (*Pycnanthemum lanceolatum*). It would be a good plan to scatter waste and sandy places with the seeds, but they would not repay especial cultivation. It is very common in the Central and Western States.

Your bees are clustered on the hives because honey-bound in the brood-chamber. The color of the hives has nothing to do with it, except, perhaps, to make them lounge on the outer instead of the inner side of the hives caused by the greater attraction of heat. White is the better color o paint them.—ED.]

Basswood Come and Gone.—Basswood has come and gone, and the result is no surplus in general. Honey that is taken out now is dark colored, and of very poor quality. We have had nice rains lately, which may make fall pasturage good, but surplus is out of the question here this season.

W. H. S. GROUT.
Kennedy, N. Y., Aug. 10, 1882.

Immense White Clover Crop.—I will try and give the prospects of a honey crop in this locality, and that is very poor. This is my 3d year since I commenced to keep bees. They done very well in swarming this season; I had 6 in the spring, now I have 13, and 2 went to the woods. Too cold and wet this season. We had no locust bloom, and very little linden, which was 2 weeks late, but the greatest white clover crop I ever saw commenced about the 10th of June, and is now, within the last day or two, disappearing. I have not taken any comb honey yet. I extracted 4 gallons out of my 2 first swarms. I hope better things this fall, and next season. My bees have done as well as any in this part of the country. I inclose to you a flower that

I find growing here, that the bees are working on in preference to anything else, that is, any other flowers that are growing about where this grows, and there are a good many other kinds. What is its value as a honey plant? It seems to grow on sandy, barren land the best. H. C. WHITLOW.
North Manchester, Ind., Aug. 11.

[The specimen of plant sent is a vervain, and an excellent honey plant.—ED.]

Shipping Crates.—1. Is a shipping crate made of ½ inch, or ⅞ inch material, that will hold 12 two-pound sections? 2. Will the crate be returned or not? 3. Should the crate be weighed and marked before it is filled? W. T. HOHENSHELL.
Munster, Ill.

[The top, bottom and sides should be ¼ inch, and the ends ⅝ inch material.

2. The crates are not returned.

3. You can weigh and mark the crate before it is filled, or, if they average about the same, make a note in the bill, and deduct as tare from the gross weight; but always specify the weight, so the retailer will not be obliged to empty a crate before buying, to get its weight.—ED.]

No Honey from Basswood.—Very little honey in this part of the State. Cold and rainy in white clover time. Basswood was in bloom 2 weeks, and weather was warm and dry, but it failed to yield or secrete honey. I have known more honey to be gathered in 5 days; only 20 lbs. to the colony, and an average of half a section of white; 175 colonies spring count; increased 25. Last year I obtained 100 lbs. of white honey, and doubled with increase. Prospects for buckwheat are good, but that may fail, like the rest. W. L. COGGSHALL.
West Groton, N. Y., Aug. 10, 1882.

Is Satisfied.—I am glad to say that the "cloud with silver lining" came this way long enough to give us a nice little shower of honey. The first of the season was very cool and wet, but about July 8th the weather cleared, and though still cool, we had a few days' yield from white clover; and on the 14th the bees commenced to work on basswood, and for 16 days strong colonies did nicely. On the 23d one of our colonies was set on the scales at 8½ o'clock a. m., and at 8 p. m., it had gained 25 lbs., and on the 24th, from 6 a. m. until 8 p. m., it gained 22¼ lbs. Myself and son have taken from 50 colonies 3,800 lbs. of extracted and 800 lbs. of comb honey, and have sufficient in the hives to bring the amount up to 5,000 lbs. This, of course, is not a big yield, but when there is so much general complaint, we are thankful for such small favors. I am much pleased with Mr. Heddon's manner of transferring, as given in the BEE JOURNAL of July 12th, but should object to waiting 21 days before finishing up the "job," as by that time many drones would very likely be hatched, if the first colony be driven out during first bloom, and the bees, such as usually found in box hives, unless I did not care as to the stock I introduced into my apiary, and would much prefer to have a few irregular combs, which may be easily exchanged for foundation later in the season. A. J. HATFIELD.
New Carlisle, Ind., Aug. 8, 1882.

Robbing Parent Colony.—Bees wintered well around here last winter. I wintered 35 colonies on their summer stands, losing 2 queenless colonies. We had a cold, wet spring, so much so that the bees could not do anything till the first of June. They were in better condition on the first of April than they were on the first of June. They had to be fed till that time; since then they have done pretty well. I got 19 swarms, and 4 by division. One swarm that came off in July commenced to rob the old stand a few days after; the two colonies are about 50 feet apart; I have tried everything that I have heard of to stop them, but all in vain, so I shut up the robbers for 2 days and put them in the cellar. Everything was quiet then; on the second day, an hour before sundown, I put them out and they went to robbing again, so I guess I will have to take them a mile or two away for a month or two. One among the best ways to stop robbing, I find, is to take a pane of glass 10x12, or larger, and set it slanting before the entrance; the robbers will fly against it, and if they do find their way in, the guard will attack them, and if they fly up they will fly against the glass and fall back, only to be attacked again by the guards. The regular bees will soon learn their way out and in. 1. What is the reason of the old colony allowing the young swarm to rob them, and not allow no others to rob them. 2. How can I stop them. A. RICKENBACHER.
Gahanna, Ohio, Aug. 10, 1882.

[The parent colony allowed the robbing, probably, because they were powerless to prevent it, and, perhaps, the robbers themselves helped to repel others.

2. The better way we think, in this case, is to exchange places with the hives.—ED.]

Crops Enormous.—The season here for the apiculturist as well as the agriculturist has been all that could be desired. Our crops of every thing that the earth produces have been enormous. W. S. RAINEY.
Columbia, Tenn., Aug. 12, 1882.

Reversible Frames.—Bees have done very well here this season. The season opened late, but has continued later than usual; white clover yielding honey nearly through July. If we get a fall yield of honey we will have no reason to complain of the season's work. I have been using a reversible frame some this season; and am highly pleased with it. After extracting a frame, I reverse it when I put it back in the hive, and in three days the comb is fastened to the bottom bar as securely as it is to the top bar, which is a great advantage in extracting, shipping bees, etc. Your combs are not breaking and falling out in manipulating them. I believe the "coming hive" must have a reversible frame. H. D. EDWARDS.
Delhi, Ill., Aug. 10, 1882.

Fall Italianizing.—I have some old black queens that I wish to supersede with Italians this fall, after honey harvest. 1. Which would be the best time, just as the flow of honey ceases or later, when done breeding, or just before going into winter quarters? 2. Can I take out the old queens and introduce dollar queens late, and then pack them up for winter? HENRY TILLEY.
Castle Hill, Maine.

[1. It will be better to introduce the queens early as possible, so as to have time to introduce others should any disaster happen.

2. Yes; but we would not put it off that long, for the above reason.—ED.]

Best During Fourteen Years.—My report of the honey season just past, is the best during the 14 years of my bee-keeping. I commenced the season with 30 good colonies, and 12 that in the beginning I did not expect any surplus from, but from the 42 colonies I have taken 630 lbs. of comb honey, and 3,700 lbs. of extracted, the best colony yielding over 300 lbs., and it being the best Italian colony in my apiary. I have increased to 84, all in the best condition for winter. I expect some late honey yet, as everything is very favorable. I had 7 swarms run away that I know of. THOS. B. QUINLAN.
Cedar Rapids, Iowa, Aug. 9, 1882.

Bees Robbing.—There is no honey flow now and bees are following me around as I am working in the yard, trying to rob. From all I can learn, the present season has been the poorest for honey, in this State, for the past 13 years. G. M. DOOLITTLE.
Borodino, N. Y., Aug. 10, 1882.

Bees Increased 250 per cent.—My bees have increased by natural swarming 250 per cent., and are all full now in the lower story of the hives (I use Langstroth hives). They are storing honey in the surplus boxes, from buckwheat, catnip, goldenrod, and smartweed. We have plenty of basswood and this has been a wonderful year for white clover. No swarms until June 25. T. F. KINSEL.
Shiloh, O., Aug. 11, 1882.

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THE AMERICAN BEE JOURNAL

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☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

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Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

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Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

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☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

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Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Emerson Binders.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

◆

☞ When you meet with an accident, get a sprained ankle, or otherwise injured, don't go to the expense of sending for a doctor, but apply Kendall's Spavin Cure, and you will experience instant relief. 32w4t

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Bingham's Smoker Corner.

Cyprians Conquered.—All summer it has been "which and t'other" with me and the Cyprian colony of bees I have; but at last I am "boss"—Bingham's Conqueror Smoker did it. If you want lots of smoke, just at the right time, get a Conqueror Smoker of Bingham. G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

WANTED—Some one to buy half interest in an Apiary of 100 colonies. Said apiary can be increased to 200 if desired. All are in movable frame hives. No honey has been extracted to date. Would like to Italianize the whole. Locality good. The right man or woman can secure a good bargain. Inquire at Postoffice at Hillsboro, Wis., or address **Box 83**, Hillsboro, Vernon Co., Wis. [34w1t] August 18, 1882.

GOLDEN ITALIAN QUEENS,

Bred from Imported Mothers. Single Queen, $1; 6 for $5. Purity, safe arrival, and satisfaction guaranteed. For particulars, address
34w1t F. H. SCATTERGOOD, Newgarden, O.

HENRY ALLEY, WENHAM, MASS.

Queens Worth $2.00 for $1.25.

Large, handsome and beautiful. Every one warranted as good in all respects as tested queens. No loss of queens by mail in my new cages—all go safely. Safe arrival and purity guaranteed. Italian, Cyprian and Holy Land Queens by return mail. No money required until queen is received.
33w3t

PRIZE QUEENS FOR 1882.

From the Evergreen Apiary.

REV. E. L. BRIGGS, of Wilton Junction, Iowa, will furnish Italian Queens from either of his Prize Mothers, as early in the coming season as they can be bred, at the following rates: Tested Queens, $3; Warranted Queens, $2; Queens without guarantee, $1; Two comb Nucleus, with Tested Queen, $4. Orders filled in rotation, as received, if accompanied with the cash. 3w26t

HONEY

For the past few years I have made this excellent food my leading article. Having the best established reputation in this city as a dealer in PURE HONEY direct from the Apiaries, enables me to obtain the highest market prices. Your consignments and correspondence respectfully solicited.

R. A. BURNETT, Commission Merchant,
Successor to Conner, Burnett & Co.,
28w13t 161 So. Water Street, Chicago, Ill.

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. *Sells at Sight*, Double your money Address Dr. Chase's Printing House, Ann Arbor, Mich

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., August 20, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.
BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.
AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for honey is quiet. Extracted brings 7@10c. on arrival. No comb honey on the market worth mentioning, prices nominal.
BEESWAX—Scarce, and brings 20@25c. on arrival. C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The crop of 1882 is beginning to come forward, and so far very nice goods have been offered. Sales range at 18@20c. per lb.; one pound sections selling at the highest range, when well filled and white. Extracted, few offerings and demand light at 8@9c.
BEESWAX—25c. for prime yellow; dark 18@22c.
R. A. BURNETT, 165 South Water St.

NEW YORK.

HONEY—White clover, fancy, 1 lb. bxs., 15@16c.; white clover, good to choice, 1 and 2 lb. bxs., 13@14c; buckwheat, 2 lb. bxs., per lb., 11@12c. Extracted and strained, white, 9@10c; dark 7@8c.
BEESWAX—The movement in wax continues light, and chiefly in small parcels of choice at about 27@28c. Western, pure, 26@27c; Southern, pure, 27@28c.
D. W. QUINBY, 105 Park Place

CLEVELAND.

HONEY—The market is quite active with us; it is beginning to come forward more liberally, and the demand is more fully met. For two days past we have not been able to sell for over 22c. per lb. for best white 1 lb. sections; of 2 lb. sections none have been received. Extracted we hold at 14c. for small packages, but have not made any sales.
BEESWAX—25@28c.
A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—The market is firm for extracted and choice comb. Offerings and demand are light.
We quote white comb, 17@18c.; dark to good, 8@13c. Extracted, choice to extra white, 9@9½c.; dark and candied, 7@7½c. BEESWAX—28@30c.
STEARNS & SMITH, 423 Front Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.
BEESWAX—Prime quality, 25c.
CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—A fair movement in strained at 7½@8.—one lot of 25 bbls. reported sold at 8c. Some new comb (choice white clover offered), but little sold—held at 18@20c. per lb.; extracted quiet at 9@10c.
BEESWAX—Easier at 26@27c. for prime.
R. C. GREER & Co., 117 N. Main Street.

Rev. A. SALISBURY
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20 Years Experience in Queen Rearing.
Our Motto is:

—"Low Prices, Quick Returns; Customers Never Defrauded."
Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2
Extra Queens, for swarming season, ready, if we are timely notified.
One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Safe arrival guaranteed.
20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1wly.

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I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.
14w39t **J. S. TADLOCK.**

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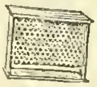
COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.
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I wish to buy a quantity of good yellow Beeswax. I am paying **25c.** per pound, delivered here, Cash on arrival. Shipments solicted.
To avoid mistakes, the name of the shipper should always be on each package.
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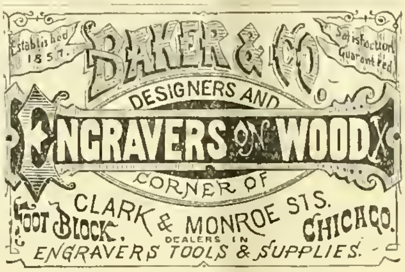
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Management of an Apiary for Pleasure and Profit; by
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It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.
925 W. Madison Street, Chicago, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 100 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment.—Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

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Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

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and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

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We now quote an

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Until further notice, the price of all the styles and kinds of Foundation, except the VanDeusen (flat bottom), will be

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Owing to the large advance in the price of wax, I now quote prices thus: Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

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1882.-ITALIAN QUEENS.-1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby Smoker for $1.50. Address all orders to

L. J. DIEHL,

(Money Order Office)—Butler, Dekalb Co., Ind.

☞ Parties purchasing Golden Italians from me that have mismated, and who feel that they are not what they should be, will please write at once, so that I can send more queens this season.

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THE CONQUEROR.

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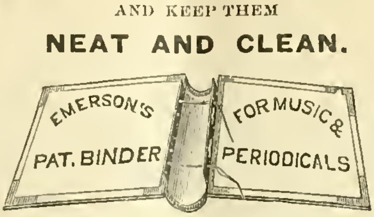

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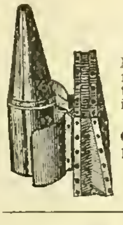

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2-frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
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This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

—:o:—

Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—*L'Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—*British Bee Journal.*

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYNKOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—A. E. WENZEL.

My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—WM. VAN ANTWERP, M. D

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Buletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey-producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To al taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

—:o:—

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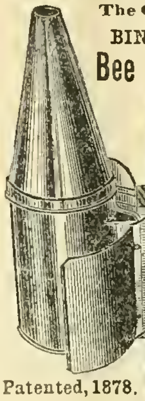

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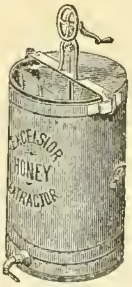

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ESTABLISHED IN 1861

THE AMERICAN BEE JOURNAL

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items..........545, 546
Planting for Bee Pasturage.......... 545
Successful Honey Show.......... 545
Practical Co-operation.......... 546

Among Our Exchanges—

Honey and Bee Shows.......... 547
Driving Away Red Ants.......... 547
Toads and Bees.......... 547
Manufacturing Supplies.......... 547

Correspondence—

Sale of Comb Honey—No. 1.......... 548
This Season's Honey Crop, etc.......... 548
Philadelphia, Pa., Association.......... 549
Given vs. Any Foundation.......... 549
No "Gap" Here in Honey Flow.......... 550
Queen Shipping Cages.......... 550
The Yellow Race of Bees.......... 551

Convention Notes—

Caledonian Apiarian Society.......... 553
Convention Notices.......... 553
Local Convention Directory.......... 554

Selections from Our Letter Box—

Clipping Queens.......... 554
Preference for Catnip.......... 554
Bees and Amber Syrup.......... 554
Bees Booming.......... 554
Less than an Average.......... 554
Seeding an Orchard.......... 555
Excessive Swarming.......... 555
Cyprians Beat all the Rest.......... 555
Never Saw a Better Honey Harvest.......... 555
Recapping a Queen Cell.......... 555
Best Honey Flow of the Season.......... 555
Swarming Perplexities.......... 555
Honey-Dew.......... 556
Eleven Colonies from One.......... 556
Corn Tassel Honey.......... 556
Not Doing Well.......... 556
Cellar for Winter.......... 556
A Slight Mistake.......... 556
Not So Bad.......... 556
Oregon for Bees.......... 556
Sweet Clover.......... 556
Crossing Stock.......... 556
Cleome.......... 556
Sowing for Honey.......... 556

Planting for Bee Pasturage.

Two of our correspondents propound the following questions in regard to planting for bee pasturage:

1. What time of year is best to sow sweet clover, and how much per acre? 2. Can I sow it this fall with grain? 3. Is it of any use for hay? 4. Where can I get some seed of the Simpson honey plant?

1. In early fall is best, then you will get some bloom the next season. If sown in early spring, catnip, cleome, motherwort, or mignonette can be sown with it to give a honey bloom the first season, after which the sweet clover will take care of itself. If sown alone, we would prefer about 8 to 10 pounds per acre; if with something else, 4 to 6 pounds per acre. It should be sown early enough to get a good freezing, which will not hurt catnip or motherwort. Cleome must be sown in the fall.

2. Yes.

3. We have heard the question answered both affirmatively and negatively; but think if cut early it would make excellent hay, certainly equal to red clover. We know it makes good stock pasture.

4. We do not know, but suppose it will be advertised in our columns by those who may have it for sale.

◆

☞ We have received complimentary tickets to the St. Joseph, Mo., Inter-State Exposition, to be held Sept. 4 to 9, 1882. We shall not be able to be present, but hope the apiarian department will be a very interesting and attractive feature of the Exposition.

Successful Honey Show.—In a private letter, Mr. John D. Hutchison, of Glasgow, Scotland, says their Caledonian Honey Show was a complete success in everything except the weather. The entry receipts amounted to £65 ($325) for the four days, and he thinks had the weather been favorable, the receipts would have been largely augmented. He reports, on Aug. 10th, splendid weather, and a large number of the bees are away to the heather. He says: "Should the weather continue fine, we expect to have a large surplus of heather honey."

◆

☞ We have received the 28th Annual Premium List of the Knox County (Ill.) Fair. In Class J, of which Mr. C. W. McKown is Superintendent, there is quite a liberal list of premiums for the best display of honey, bees, implements, etc., and we predict Mr. McKown will make his Class one of the most attractive and successful at the Fair, even if compelled to make most of the exhibits himself. It is very encouraging to observe the interest being awakened in apiarian matters among the managers of fairs and expositions; but a few years, and no premium list will be complete without a liberal recognition of apiculture as one of the leading rural occupations.

◆

☞ At the recent Bee and Honey Show of the Caledonian Apiarian Society, at Glasgow, several entries were made for the premium for best colony of foreign bees, but the judges made no award, as none were deemed perfectly pure. This, we suppose, included Italians, Cyprians and Syrians. We can hardly imagine what could have been the standard by which judgment was rendered, if none of the eminent exhibitors could show a perfectly pure colony of foreign bees.

Practical Co-operation.

Bee-keepers have cause for congratulation, in view of the great interest recently being manifested by the managers and directors of the leading expositions and fairs in the country, in recognizing the importance of scientific apiculture. One after another they are rapidly falling in line, and one after another bee-keepers are appreciating the necessity of encouraging this liberality, and of doing their part toward making the bee and honey department of each of these popular gatherings as attractive and instructive as possible. It is the most feasible and remunerative method of educating the great mass of consumers to the desirableness of using a pure article of honey as a common diet, to the exclusion of the vile conglomerations now palmed off on the public as strained honey, etc. Once a suspicion is aroused against those swindlers, and it will soon deepen into a conviction; once convince the public your honey *is pure* and wholesome, and its use will become popular. Therefore, every bee-keeper placing an attractive article of honey on exhibition, and bees for manipulation, is not alone adding to the interest of the exposition, but is enriching himself by advertising his product, and benefitting the public by introducing a wholesome and economical article of diet for their consumption.

In this connection we cannot forbear calling special attention to the action of the Executive Committee of the Michigan Central Bee-Keepers' Society, in calling their Society to meet in Convention "two weeks before the Annual Fair of the Central Michigan Agricultural Society, for the purpose of making the final arrangements for a large exhibit of bees, honey and apiarian supplies."

This is feasible and practical co-operation, and will accomplish more permanent, remunerative good, than all the rings and resolves and wire-pulling could attempt, for it brings the producers face to face with their customers—the consumers, and gives each an opportunity to relate the special merits of his own goods. Again, it places the combined indorsement of a large and respectable society upon the special exhibit of each individual member, which will go further in the estimation of the public than the assurances of all the middle-men in the community.

The St. Joseph, Mo., Inter-State Exposition is again coming to the front with a liberality worthy of the co-operation of every bee-keeper in the great Missouri Valley. One year ago they took the lead by placing the apiarian department under the efficient management of Hon. R. S. Musser, of St. Joseph, Mo., who, by his well-directed efforts and untiring zeal, succeeded in making it the most attractive feature of their truly successful exposition, and as a practical and notable result, the honey crop of the Missouri Valley failed to be sufficient to supply a remunerative home demand, and St. Louis and Chicago dealers have been obliged to make up a large deficiency. This year the St. Joseph Inter-State Exposition have largely increased their Society and special premiums, and their list is one of the most liberal in the country. It is worthy of mention, that the local bee-keepers appreciate the permanent benefits of last year's efforts to the extent of themselves offering special premiums to stimulate competition in the exhibits and perfection in the implements. The bee department this season is under the able supervision of Mr. D. G. Parker, who will himself enter the arena as an exhibitor of albino bees.

We give publicity to the following letter from Hon. R. S. Musser, of St. Joseph, Mo., bearing date Aug. 22, 1882:

> EDITOR BEE JOURNAL: The weather for the last two weeks has been very favorable for a honey flow, and the bees have had quite a harvest.
>
> A fine display of honey at the St. Joseph Inter-State Exposition is now an assured fact. The Exposition commences Sept. 5, and continues six days.
>
> Mr. J. L. Smith, of Lawson, Ray Co., Mo., will exhibit several colonies of Cyprians and Italians.
>
> Mr. D. G. Parker will exhibit one colony of albinos.
>
> In making up the Exposition premium list, the premium for the best arranged bee hive was unintentionally omitted. Our enterprising fellow-townsman, Mr. Frank G. Hopkins, comes forward with a special of $10 for the best arranged bee hive for all purposes, and the Association will add its diploma. Here is a chance for practical invention among the enthusiasts in bee-culture.
>
> The Association through its Secretary, C. F. Ernst, is doing everything to make the apiarian department a success.
>
> The officers of the Association would be very glad to have you attend the Exposition this fall, so that you might see the result of your visit and interesting lecture last year, on Bees and Honey.

The premiums, general and special, amount to over $200, and are the most liberal yet offered. Among the specials is one of $20, for the best 20 pounds of honey exhibited by any lady not a resident of Missouri. This should awaken the emulative efforts of many of the fair apiarists, several of whom, notably Mrs. L. Harrison, Vice President for Illinois of the North American Bee-Keepers' Society, and the Misses Wilkins and Mrs. Baker of Michigan, are apiarists of no mean merit.

What with the many very able bee-keepers' societies and conventions to harmonize action and customs, and the liberal inducements and facilities being held out by fairs and expositions, we do not see how a more effective system of co-operation can possibly be inaugurated, especially if bee-keepers themselves turn out *en masse* to attend these conventions and fairs, and bear each his share of the burden in counseling wisdom and giving instruction. The fact of the apiarian department being novel and attractive, is proof positive that the public need enlightenment regarding its exhibits, and the more they are familiarized with it, the greater will be the demand for its products.

◆

☞We learn, by private letter, that Mr. Frank Benton has removed from Larnaca, Cyprus, to Beyrout, Syria. We have not been advised as to the cause of his change of location. Can it be that he is abandoning the propagation of Cyprian bees, and has removed to facilitate the rearing of Syrians with greater purity?

◆

☞We will supply sample copies of the BEE JOURNAL and large colored posters to any who may make a display at the coming fairs, to aid in getting up clubs.

◆

☞We have received the Catalogue of small fruits and grape vines, for 1882, of E. P. Roe, Cornwall-on-the-Hudson, N. Y. It contains 20 pages, embracing everything in his line.

◆

☞The census report, 1880, will make the largest book ever published. It will consist of 30 volumes, and will cost $1,000,000. To be of any value, it ought to be issued to the public soon.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

AMONG OUR EXCHANGES

MISCELLANEOUS.

Honey and Bee Shows.—The *American Agriculturist* gives the following on Honey and Bee Shows in Europe and America:

> One of the features of the apiculture of Europe is the holding of large exhibitions of bee products and apiarian implements. The bee journals of Great Britain, France, and Germany are full of accounts of these large and interesting Honey Shows. So great is the skill displayed in making the exhibits, and so attractive are the displays, that it is no rare thing for the Shows to be visited by kings and queens. Surely the European apiarists find it advantageous to make these exhibitions, or they would not continue them year after year at great expense of time and labor. Not only are these meetings noted for their beautiful honey shows, but numerous essays, lectures, and discussions in connection with them, serve as educators in apicultural science and art.
>
> Heretofore the honey exhibits in America have consisted of a few pounds of second-rate honey and a little beeswax, tucked away in some obscure corner, and sandwiched in between maple-sugar and syrup and sorghum-molasses. The premiums have ranged among the cents, and occasionally, in some unusual cases, have even reached a dollar. There was nothing to induce producers of honey to make exhibits, and still less to excite the interest or attention of visitors. Of course bee-keepers are to blame for this state of things, as no business demonstrates its importance at expositions unless its patrons possess sufficient enterprise to push it forward. It is very strange that American apiarists who have gone to the front in every other line of agricultural progress, have been so slow to recognize the great opportunity to advance the interest of their pursuit by encouraging and patronizing these exhibitions of bees, honey, etc. Owing to the fact that some of our leading bee-keepers had visited Europe, and witnessed the substantial advantages that resulted from these Honey Shows, there were two successful exhibitions of this kind held in America last year. These were at St. Joseph, Mo., and at Toronto, Canada, and so attractive were they, that no other part of the Fairs received so favorable comment from the press. Tons of honey were on exhibition at Toronto, and thousands of pounds were sold there. Bees were also exhibited and manipulated at the Fair, and the exhibit was further aided by the display of all the numerous and valuable implements and appliances that aid the bee-keeper in his work.
>
> The place to hold these exhibitions is in connection with the several State and County Fairs of the country. The requisites to success are generally premiums, in keeping with the importance of apiculture, a separate building in which to hold the display, a room fitted with gauze, so that the bees can be manipulated each day, with no fear from stings, even by the most timid person. The honey should be taken in quantities, both comb in sections and extracted honey in jars and tin pails. This should be put up with the greatest neatness, and labeled in an attractive manner. Some of it should be put in glass crates, so as to teach visitors how to present the honey for sale at the groceries. There should also be a large exhibition of wax, foundation, implements, and extractors, so that the decision of the judges, who should be experts, may carry weight with it. The best colony of bees should be taken, so ventilated that the bees will not suffer, and arranged that they can be so shown that every visitor may see how easy it is to handle bees without harm. Wire gauze may be so arranged around the hive that there need be no danger of exciting the fears even of the visitors. If the bees are properly ventilated, and fed a little every day, they will not suffer by being taken to the Fairs.

◆

Driving away Red Ants.—In *Our Home and Science Gossip*, the following experiment is given:

> Professor Leidly states that when he purchased his present residence, while it was undergoing repairs, he noticed a fragment of bread left by the workmen in one of the second story rooms swarming with little red ants. Apprehending that the house was seriously infested, to ascertain whether it was so he placed a piece of cake in every room from cellar to attic. At noon every piece was found covered with ants.
>
> Having provided a cup of turpentine oil, each piece was picked up with forceps and the ants tapped into the oil. The cake was then replaced and in the evening was found covered with ants. The same process was gone through the following two days, morning, noon and night.
>
> The third day the number of ants was greatly diminished and on the fourth there were none. He at once concluded that they were all destroyed, but in the attic he found a few feeding on the dead house flies, which led him to suppose that the remainder had become suspicious of sweet cake. He accordingly distributed through the house pieces of bacon, which were afterwards found swarming with ants. This was repeated with the same result for several days, when in a like manner with the cake, the ants finally ceased to visit the bacon.
>
> Pieces of cheese were next tried with the same results, but with an undoubted thinning in the multitude of the ants. When the cheese proved no longer attractive, recollecting the feast on dead flies in the attic, dead grasshoppers were supplied from the garden.
>
> These again proved too much for the ants, and after a few days trial neither grasshoppers nor anything else attracted them. They appear to have been thoroughly exterminated, nor has the house since been infested with them.

◆

Toads and Bees.—The *Canadian Farmer* says:

> Those who keep bees need to look out sharply for toads. Go among the hives in the "gloamin'," and ten to one you will see a solemn toad beside each of them, with face upturned heavenward, as though praying. So he is, phonetically speaking; but phonography, with all its advantages, fails here, for you must spell that word with an "e." He is preying on your bees, and if you watch him closely you will see him, every now and then, dart out his long, slimy tongue, and gather them in with a celerity and gusto perfectly marvellous. Toads are valuable in a garden, but destructive in an apiary.

◆

Manufacturing Supplies.—A correspondent of the *Canadian Farmer* takes exception to the views of the editor in the following language:

> You say every bee-keeper should make his own hives (which advice is good), and I suppose make his own extractor, make his own comb foundation, and everything he uses, rear his own bees and queens. Now the same might be said of the farmer. He should make his own wagon, mowing machine and horse rake, ploughs, and all other implements, rear all his own stock. But how is he to get started, besides most of the above articles could not be made without proper machinery. It would not pay every bee-keeper or farmer to get such machinery, therefore, one gets it and manufactures for his neighbors, hence a supply dealer.

☞The Northwestern Bee-Keepers' Convention will meet at Chicago, Ill., on Tuesday and Wednesday, Oct. 17 and 18, 1882. The office of the American Bee Journal has been kindly tendered as a place of meeting. A cordial invitation is extended to all bee-keepers, and especially those of the Northwestern States, to be present. The meeting takes place during the last week of the Inter-State Industrial Exposition, to enable all to obtain reduced railroad rates. First session at 10 a. m. C. C. MILLER, *Pres.*
C. C. COFFINBERRY, *Sec.*

◆

☞ Those who may wish to change from other editions to the Weekly, can do so by paying the difference.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

CORRESPONDENCE

For the American Bee Journal.

Sale of Comb Honey—No. 1.

G. M. DOOLITTLE.

Owing to pressure of business, a sick and helpless father to care for, and a large correspondence to keep up, I have not been able to give the last part of my series of articles as soon after the second part as I had expected to, but as this is the time we are all thinking about marketing our honey, perhaps these last will be in as good time as if written earlier. On page 390 we had our honey all graded and crated in nice shape, ready for sale at any time that we could get prices to meet our views as to the value thereof. How to best sell a given production is a question of vital importance. Many seem to overlook this fact, and by their actions tell us that a large production is about all they are after. I have known parties to pride themselves about the large production of butter they could get from a given number of cows, hurrying it off to market in an unseasonable time, and selling it at a low figure, thereby realizing less for their large production than did their more sagacious neighbors with ⅔ the amount. Just so honey is often forced upon the market at a low price by those not posted, while the live bee-keeper will get nearly ⅓ more for his crop from having a full knowledge of the value of his production.

Hence, after producing a crop of honey, the next thing to do is to thoroughly post ourselves regarding its value. We frequently see men selling nice honey at 12 to 14 cents per lb., when the same article was worth 18, claiming that the price they sold at was all they could get for it at the market they were in. This might be so, but the cause of so doing was, in not being posted regarding the price paid in other markets. Much honey is yearly sold in Syracuse, N. Y., at quite a low figure, while if the person selling was posted regarding the value of honey in Boston, New York and Philadelphia, such sales would not be made. Thus, these sales by parties not posted keeps the market so low that the wide-awake bee-keeper has no chance to place his production in a market near home. But how shall we ascertain the true value of our honey? By reading the BEE JOURNAL we can find out the market quotations in the different cities about us. Thus, if New York quotes honey at 20 cents per lb., our product is worth *that* less the expense of getting it there, and the commission charged by the merchant we consign it to. For example: to get the best express rates I go to Syracuse, N. Y., where the rate of $1 for 100 lbs. is given on honey to New York City. As this is gross weight, the weight of the crates must be deducted, by which we find that it costs about $1 for every 85 lbs. of honey—say 1¼ cts. per lb.—so it will be sure to cover all expenses of getting to market. Next deduct 10 per cent. for selling (as this is the price charged by most commission merchants), and we have 2 cents more, or 3¼ cents in all, which taken from 20 cents, shows that the actual value of our honey at home is 16¾ cents as compared with the New York market. Now figure on Chicago, Boston and other markets, and see if any of these will do any better, and in this way you can find out the highest value of your crop, and where it will pay you best to ship, thus being thoroughly posted in the matter. Having done this, we are prepared to sell at home or abroad.

First, then, I will speak of selling at home. Having ascertained the value of our honey, we go to our nearest town with an average sample of our honey, and ask our grocer what he can pay for honey. If he can pay *cash down* as much into 1 cent per lb. as I have found it to be worth by the above line of reasoning, I sell it to him. My reasons for so doing have been, that in case of selling outright I have the money at my disposal, and can often invest it so as to make more than the penny a pound would amount to before a return was made from the commission man, for selling on commission sometimes proves to be a slow process of disposing of our production. If our grocer does not offer us the price we have figured our honey to be worth, show him the quotations, and our line of reasoning, which will often change his opinion by convincing him that we are not trying to beat him, nor get more than our honey is really worth. Thus we make a tour through all the towns about us, and if we produce but a few hundred lbs., all can be disposed of, providing our friend who "sells for a song" has not been ahead of us. If we are given to peddling, there is but little trouble in selling quite a large crop throughout the surrounding country, but in this case the bee-keeper needs considerable time at his command. The price of the honey should also be put enough higher than we have proven the real value to be, to cover all the necessary expenses of retailing our crop. In selling in this way, a good plan is to go over the route, or send a boy a week in advance of the time we expect to sell, with a little honey as a sample, and printed slips telling what flowers the honey is made from, the price per lb., and when we shall come around with it for sale. Let the boy leave a small piece of honey at each house and one of the printed slips, and upon going around you will find the way opened for quite an extensive sale of honey in a retail way. Several years ago, being short of money to pay my taxes, and having a little second quality honey on hand, I started out on the above plan, to see if I could not meet this certainty ("taxes"), which is classed with "death" as being the only two certain things in this life. I left a sample and slip at 30 houses, which numbered 115 inhabitants. According to the time appointed on the slips I was there with the honey, and the result showed 153 lbs. sold, or an average of 1⅓ lbs. to each person, thereby securing enough to meet the collector's bill and some to spare. However, as I dislike to peddle, I generally adopt other methods of sale; yet when a person has the tact to sell, there is no way more profitable than this in my humble opinion. My next will be selling in large cities and shipping on commission.

Borodino, N. Y.

For the American Bee Journal.

This Season's Honey Crop, etc.

J. R. BAKER.

My bees have not done so well up to this time, this season, as they did last. They have gathered enough honey to fill their brood chambers chock-full, and have stored a good deal of surplus; and they are now working very industriously. Should the frost be late in coming, and the weather be propitious from this time on, I shall have a very fair crop. As "hope is the anchor of the soul," I shall use it for my consolation until I realize its full fruition, or be compelled to take my place in the ranks of those who have had hope so long deferred that the heart has become sick.

And now, I have a little joke to tell on myself, and a word of encouragement for the ladies who contemplate engaging in apiculture. Mrs. Ellen Gray, who lives a fourth of a mile from where I keep part of my bees, concluded last fall that she would like bee-keeping, and asked me to sell her several colonies. I let her have 20 colonies in 10 frame Langstroth hives, for which she paid me eight dollars each. She knew positively nothing about the business, only what little she had gathered from a visit or two to my apiary, and the little she gleaned from my conversation on the subject, for you know bee-keepers will talk, and talk bees and honey, too. Well, when I made the sale of the 20 colonies to the lady, part of the contract was that I should give her such advice and instruction as I thought necessary to assist her to a successful career as an apiculturist. All the bees, both hers and mine, were put in one cellar for the winter, and when spring came and the cheerful sunshine began to warm this part of the world into new life; when the blue birds cheered our hearts with their merry notes at the funeral of old winter, and the buds of the willow and maple and elm commenced to unfold themselves under the inviting warmth of the king of day, the lady bee-keeper and myself commenced to talk bees with a relish that only those can appreciate who revel in the songs of birds and the beauty of opening flowers and the merry hum of the tireless bees, as they sweep over mountain and valley, garnering the precious nectar that is poured out in amber drops from the great and exhaustless storehouse of nature.

I performed my part of the work as

best I could, lending her Prof. Cook's "Manual of the Apiary" and the Weekly Bee Journal, and selling her Mr. A. I. Root's "A B C" book. My student seemed very much interested in her new vocation, and learned, as I thought, very rapidly. Having much work to do for myself, as the season advanced, I had to let the lady look after her interests with but very little assistance from me. And now, ladies, I am humiliated, for the student has excelled her teacher in honey production, the first season after she embarked in the business! She has got, to date, twice as much honey from the same number of colonies as I have.

Mrs. Gray did not trust to "luck." She has no faith in it; but she went to work right, and victory is hers. She has 40 colonies in most excellent condition, half of them crowding the boxes and sections with beautiful honey, and a good prospect at present for harvesting a big crop by the end of the season. Who can show a more successful student? And who will say that ladies cannot make successful bee-keepers?

Keithsburg, Ill.

For the American Bee Journal.

Philadelphia, Pa., Association.

ARTHUR TODD.

The members of the Philadelphia, and Vicinity Bee-Keepers' Association, met in the evening of the 14th inst. at the residence of the Secretary, Mr. Hahman.

This gentleman has kept a colony or two of bees some years with varying success, but this year having made a study of the best literature he can obtain, has gone more scientifically to work, and with results eminently satisfactory. His visitor were well rewarded for any extra trouble in reaching Mr. Hahman's out-of-town residence by an inspection of his neatly kept and prosperous apiary. The mysteries of the hive were unfolded, and opportunity given to see comb foundation in process of being worked out, the queen bee, and all the little bees.

Mr. Hahman stated that he commenced the season with 3 colonies; about swarming time, he found a stray swarm on his grounds which, having supplied with a good home, they deigned to accept and so made his stock four. His first 3 colonies yielded five swarms which were all safely hived. Afterwards by division Mr. Hahman increased three, so that now at the end of the season he has 9 strong colonies, and 3 fairly good. He has sixty pounds of extracted honey which he will sell at 8c. per lb.—$4.80. Forty pounds in section boxes, all sold at 20c. per lb.—$8.00. Reckoning his increase in bees as eight colonies at $5.00—$40.00; this, together with $12.80 for honey, makes the respectable sum of $52.80 for profit account in 1882.

Having had a most enjoyable time the members returned to town, promising to renew the visit next year, hoping on that occasion to be able to congratulate the worthy Secretary on still greater apiarian successes.

Philadelphia, Pa., Aug. 18, 1882.

For the American Bee Journal.

Given vs. Any Foundation.

JAMES HEDDEN.

In replying to Mr. Caldwell's article on page 520 of the Bee Journal, I wish to say that we agree in three particulars of the discussion:

1st. The merits of the different styles of foundation are worthy the consideration of the apiarists of this country.

2d. That there is a decided difference does not admit of a doubt.

3d. That we should, in a friendly spirit, bring out all the good points in this important branch of our business.

But upon nearly every other point in his article we differ, and it seems to me Mr. Caldwell is surely in error. I will call the reader's attention to two facts: 1st. No report has ever been made in favor of any foundation, against the Given, by any person who used and tested both styles thoroughly.

Several reports have been made, and many more doubtless soon will be (I have quite a number of private reports), in favor of the Given over the Dunham foundation, by parties who have thoroughly tested both. As Mr. Caldwell has nowhere told us that he has ever tried the Given foundation, we fairly infer that he never has, hence, when he says he makes first-class foundation on the Dunham mill, do we not have the right to ask by what standard he uses the words "first-class"? How does he know? He further says his Dunham foundation satisfies a most fastidious class of customers. Now, I think I know how he comes by the idea that his customers are of a most fastidious class—first, because any supply dealer will soon think that, and second, he may have had his foundation found fault with by some.

He thinks I failed because I was not a good mechanic. Let us call it so. That proves that a poor mechanic can succeed nicely with a machine as well made and adapted to its purpose as is the Given press, since I have succeeded in making more sheets per minute and per hour than Mr. Caldwell has yet claimed, and that, too, with less daub and trouble of lubricating. I get the impression that Mr. Caldwell is of a conservative turn of mind; that he never says, "Give me better things, I want a better hive, a better bee, a better extractor, a better smoker, better foundation, etc., as did Langstroth, Vandervort, Coffinberry, Bingham, and others. He says: "Matchless rolls," "tried friend," "I am satisfied," "my customers are satisfied," etc.

How many of these customers do you suppose ever used Given or Vandervort foundation, either of which I found superior to Dunham foundation? How many of them ever used any foundation before? Had I been of this turn of mind I would once have said of the first Root foundation, "I am satisfied;" then of the Dunham, "I am more than satisfied;" then of the Vandervort, "I am most satisfied;" then of the Given, "I am more most satisfied," then of the 1882 improved Given, "I am so satisfied that I do not want any more of these good satisfying things." But I say to Mr. Given, "Give us a better press and a better book." I have said so, and he replied, "In 1883 I will do it." In my judgment he will. The man who has outdone all others, can then look forward to the achievement of outdoing himself.

Mr. Caldwell says, "the test of the pudding is in the eating of it," and then follows by saying that I say: "Hive a prime swarm on 8 wired frames of Given foundation, and in 48 hours (2 days) we have 8 splendid combs completed;" then says he has hived swarms on 11 frames filled with Dunham foundation, and in 3 days it would be filled with comb and honey, and every comb drawn out in a perfect manner. "Perfect" compared with what? One of his that dropped down? I do not see that, as he states it, he is ahead. But to accomplish this he tells us that three things are necessary; "1st. The foundation must be made of good tough wax; 2d. It must be fastened to the frame in the most perfect manner; 3d. It must (in his opinion) be made on the Dunham foundation machine."

Well, here is where the superiority of the Given wired foundation is established. 1st. Foundation made of any pure wax will stay perfectly in place, and be quickly drawn into perfect combs, that jarring, extracting and sun-heating will not displace. 2d. It need not be fastened to the frames at all. 3d. Such foundation cannot be made on the Dunham mill. Is the above what Mr. Caldwell calls a test? There may be as much difference in the success with which a bungler like me, and an expert, like Mr. Caldwell, would have in getting foundation rapidly and perfectly drawn, as in their ability to manufacture on the Dunham mill.

The only slight advantage I have over Mr. Caldwell is that I have owned two Dunham, three Vandervort, and three Given machines. I have made, used and sold, far and near, thousands of lbs. of these three sorts of foundation. I have conducted careful and comprehensive tests with the three sorts (Root included as the 4th), and that, too, in company with employees, students and visitors. I have also sent two and three sorts to parties ordering, and asked for tests and reports. I have also a part of the time employed an expert mechanic who is noted for his ability as a machinist, to assist in the manufacture of foundation. I found the press much the easiest to operate, and its products much the easiest for the bees to make into the best combs. During my experiments of former years, I had Dunham foundation made by various parties, the best of which was 83 lbs. made by Mrs. Dunham, and of this lot she wrote me she earned wax and all in the making. This, too, fell behind the Given of first manufacture. The Vandervort, while not equal to the Given, always showed a superiority over the Dunham. Now, there are quite a number of Vandervort mills in use, and some in the hands of those who do or have owned Dunham mills, and I ask for a report from some of these parties who speak more from experience than prejudice. I have many one pound sections of honey marked "G," "V," and "D," and we are eating them on our own table, as we need them, and the G's are the only combs that you cannot detect that foundation was used in.

Mr. Caldwell closes by assuming that there is no better machine than the Dunham, because he says he "ventures the assertion that where 1 pound of Given is made and sold, 100 lbs. of Dunham is disposed of in like manner.' I suppose he really thinks that extravagant statement is true. Should I allow my mind to reason down to my own little experience, I would think the same of the Given vs. the Dunham, because my trade is now all Given, the demand for Dunham and Vandervort running down so light I stopped trying to make these sorts at all.

But let us examine this specimen argument. Will Mr. Caldwell be so kind as to let us know how many pounds of foundation we shall have to sell from the Given mill next season to make that the best mill, and its work superior? I never knew before that you could make and sell enough foundation of any sort to make it the best foundation. By this reasoning the Root foundation excels the Given and Vandervort, if not all other sorts, Dunham included. There certainly was a time, only a few seasons ago, when the Root was the best mill, and its product the best foundation in the world, measured by this standard. This standard, given by Mr. Caldwell, is a great boon to apiarists; all we need to do now, to place all the styles of foundation in their proper class of worst, bad, good, better, best, is to take the foundation census.

Dowagiac, Mich., Aug. 17, 1882.

P. S.—At the "eleventh hour" Mr. Caldwell is saved; he says: "If there is a better machine made, I want it," and I say, Mr. Caldwell there is, and I look forward to the near day when you will know it as well as I do.

For the American Bee Journal.

No "Gap" Here in Honey Flow.

C. W. MCKOWN.

Some speak of a "gap" in the honey season. There has been no gap here this season since white clover first blossomed. It was 8 or 10 days later blossoming than usual, but the quantity was simply immense, and plenty of rain has kept it booming till the present time. The linden flow was extra good (though several days later than usual), and blossomed very unevenly; while the blossoms were dying on one tree, they were just beginning to open on the next. Thus it continued much longer than common. While it was at its best, the bees deserted the white clover to a great extent, but returned to it when the linden failed. There are about forty acres of buckwheat near my apiary, sown at intervals for five weeks. The first sown is now white with bloom, while the last is only cleverly up. Very many bees are at work on it, while some still cling to the white clover, and the sweet clover is by no means neglected.

I have not weighed the surplus from but one hive this season. Up to Aug. 7th it had yielded 203¼ lbs. of extracted honey. This, mark you, is from a single colony, excluding the product of two swarms it sent out.

My bees are still swarming; had three swarms to-day. Such a long, steady honey flow has caused the queens to lay immensely, producing bushels and bushels of bees. I have put a great many swarms in with other colonies, which is not advisable, as in many cases I have found them queenless soon after uniting. I think No. 1 bees kill No. 2 queen, and No. 2 bees kill No. 1 queen. When swarms cluster together, I invariably hive them together. Have had as many as four big swarms together in this way, and gave them room by tiering up, and it is wonderful how quickly they will gather 100 lbs. of honey. When they have clustered together at least one queen is safe.

I began the season with 60 and have more than doubled notwithstanding all the uniting, doubling up and piling together I have done. Think I shall have a big report to make when the season closes.

Gilson, Ill., Aug. 17, 1882.

For the American Bee Journal.

Queen Shipping Cages.

W. Z. HUTCHINSON.

To have queens arrive in good condition is very desirable to both shipper and receiver. To open a queen cage upon its arrival, and find the queen dead, is often a greater disappointment and loss to the purchaser than the sending of another queen is to the breeder. As Mr. Poppleton remarks, on page 411, it is a great advantage to know that a certain number of queens are sure to arrive in good condition within one or two days of a given time; and, to help bring about such a happy state of affairs, in general, please allow me to describe the cage and feed that I have been using the past year.

The cage is the old-fashioned wooden cage, made by sawing up ⅞ lumber into strips 1¾ inches wide, boring 1½ inch holes, 3¼ inches apart from centre to centre, then boring two ⅝ holes close by the side of each inch and a half hole. Of course the holes are bored nearly through the strips of wood. With a ¼ inch round iron a hole is punched through the thin partition that divides the large hole from the two small ones, and it is through these ¼ inch holes that the bees gain access to the feed with which the ⅝ holes are filled. After a strip of wood has been made up into cages, it is cut up into pieces of different lengths; some pieces containing only one cage, others two, while the longest pieces contain three cages. After reaching their destination, the cages are easily separated with a saw.

But it is to the kind of feed with which the cages are provisioned that I attribute my wonderful success in sending queens during the last year; the loss being only one queen out of 400. The queens have been sent to nearly every State and Territory in the Union, including California, Utah, Texas, Georgia and Maine; also to Canada. This feed in simply granulated sugar moistened with honey to the consistency of a stiff paste. I wet the sugar with honey pretty thoroughly, then allow it to stand a day or two, when the sugar will settle to the bottom (it does not dissolve), the honey can then be scraped from the top, and the sugar will be of the proper consistency for putting into the cages. Mr. I. R. Good, of Nappanee, Ind., who is the discoverer of this feed, prepares it by putting in plenty of honey, and, after allowing it to stand a few days, pours it into a dish or box having a wire cloth bottom, which allows the excess of honey to drain out. Mr. Good has shipped hundreds of queens this season, sending them all over the country, and has lost only two. He says that this kind of feed is better than anything else when sending bees by the pound.

During the warm weather I send about ten bees with a queen; but, as the weather gets cooler, it is, I think, better to use a larger cage, and put in more bees and more feed. I do not put in old bees with jagged wings, neither those that have just hatched, but bees that are, as nearly as I can determine, about a week old.

In order that you may see exactly how the cage is made, and then, perhaps, be enabled to give your readers a better description of it than I have done, and also that you may see the condition in which its bees and queen arrive, I will send you a cage containing an untested queen and eight or ten bees.

Rogersville, Mich., Aug. 15, 1882.

[The cage and bees have been received. We cannot improve upon Mr. Hutchinson's description of the cage. There were 10 bees accompanying the queen, and all were as bright and lively in the cage, four days after their arrival, as they were when put in. With this cage and description of feed, we are convinced a queen with her retinue will endure a fortnight's journey with perfect safety. We have seen many of Mr. Good's shipments this season, and in no instance was there even a dead bee in the cage. A great mistake is frequently made in giving the queen and bees too much air in shipping long distances, or for continued confinement, as they quite easily chill, and changes in climate, or from the heat of day to the cooling air of night, are quite as wearing as continual worrying. There can be nothing better, as a feed, than a combination of pure sugar and honey. The queen has been introduced to a queenless colony, as a recompense for her imprisonment.—Ed.]

For the American Bee Journal.

The Yellow Races of Bees.

J. P. MOORE.

I send an article which I think has never been published in the Bee Journal, entitled "The Principles of Bee-Breeding," by Frederick William Vogel, of Schmanshafel, Brandenburg, Prussia, translated from the German by the late Samuel Wagner, as follows:

If we carefully consider the topics embraced in No. 1 of our programme, we shall recognize, as the substance of them, this query, "Is it possible to produce an improved breed of bees? And if so, what are the principles of breeding which we must adopt?"

I do not deny that on this question I shall speak with a certain degree of complacency, for that which I have to communicate is not derived from the indulgence of an idle fancy, but is based on observations made at the hive—the only sure, living and pure source of apistical science.

In a discourse on the production of an improved breed of bees, we have to fix clearly in our minds the distinction between variety and race, for the two ideas are not unfrequently confounded, or used in a very arbitrary sense. The idea of variety includes a certain amount of constitutional properties. In bees there are, among others, good or bad temperaments, swarming propensity or the want of it, disposition to build drone comb, etc., etc. Allow me to include all such constitutional properties under the general term "characteristics." Variety, accordingly, is based on the characteristics. Corporeal markings, size and color, do not come into consideration in determining the idea of "variety." If the bees of any particular district are distinguished by a marked propensity for swarming, or by any other special characteristics we are warranted in designating them as a "variety." Thus, in my estimation, the heath bees of Luneberg, those of Lower Austria, etc., etc., are simply new varieties of our well-known black bee. The peculiar constitutional properties which characterize varieties are rooted in the psychical or spiritual nature of the insect, and are elicited by the kind or quality of the pasturage, by particular modes of management, by diversity of climate, or some other dominating peculiarity of the district. Accordingly, these constitutional properties disappear or are lost by lapse of time, by removal to a different locality, and thus subjecting the insect to other climatic influences and other conditions of management or pasturage. Hence, it is obvious for the production of an improved breed, mere varieties are of very subordinate account. At the same time, however, I contend that the production of an improved breed of general value—that is, one equally suited to all parts of an extensive country—is an impossibility. On the other hand, I am clearly of opinion that, for each particular district, possessing marked peculiarity of climate and pasturage, an improved breed specially suited to those conditions, may be produced. And in this aspect, the existing varieties of the honey bee are of high significance and value.

The meaning and extent of the idea expressed by the term race have long since been settled by science. The term embraces a certain amount of external corporeal markings, among which are size and color. When the bees of any extensive region, or even of a limited district, are found to be strikingly distinguished by their large or small size, by the color and quality of their pubescence, or of the tint of their dorsal bands, from the common type of the honey bee—assuming as such, for the present, our common black bee, we are warranted in designating them as a distinct variety or race; and that each variety or race has its own distinguishing constitutional characteristics is generally known.

I am not of opinion, however, that in order to produce or improve breed, recourse must necessarily be had to the foreign races which have been introduced among us, though it is often alleged that we should, from the start, have availed ourselves of them, and have endeavored thus to originate an improved breed. But had that course been adopted we should hardly ever have reached a satisfactory result. The pure races would have disappeared under our hands long before we could have succeeded in substituting an improved breed for them. It was much wiser to labor primarily to secure an ample stock of pure races, while at the same time the peculiar characteristics of each were assiduously studied. And now that both these points have been attained, we are placed in a position favoring and furnishing means and facilities, for the origination and production of an improved breed.

Permit me now to communicate the results of a series of experiments all of which had for their object to ascertain the principles which should guide and govern us in the endeavor to produce and establish an improved breed of bees. The experiments instituted were so numerous, that they might be told by fifties or hundreds.

1. Crossing the Black Bee with the Italian.—When the Italian bee was introduced by Dzierzon, it was supposed that the workers produced by the Italian queen, fertilized by a black drone, would show an intermingling of the external markings of the parents. But this was soon found to be a mistake. In the second generation already, degeneration became apparent—the hybrids divided numerically, one portion resembling the Italian, and the other the black bees. For the purpose of experiment, I continued breeding in these two directions, and in the fourth or fifth generation reached again on the one hand the pure Italian bee; and on the other in the fourth degree, the pure black bee. The hybridism of the bee was thus again resolved into its ataval elements. The facts thus experimentally ascertained are, however, of very subordinate significance, elucidating only the coloration of the hybrids. Of higher and much greater practical value, on the other hand, is the solution of the inquiry. "Do the constitutional characteristics of the two become commingled in the black-Italian hybrids? Or are those of the one variety or race simply transmitted to the other?" It is well known that very different answers have been given to these questions. Some breeders state that the hybrids of the black and Italian bees possess the constitutional properties of the Italians; while others allege the direct contrary. Some assert that the hybrids are more irascible than the black bees; others again say they are less so. Some declare that they will store more honey, while others say they will store less, etc. The truth is, the constitutional properties of the two are of an exceedingly subtle nature, which makes it extremely difficult to base a reply on the results of a cross between them. It is only by crossing the black bee with the Egyptian that we can obtain any clear light on the point under consideration.

2. Crossing the Black Bee and the Egyptian.—When the Egyptian bee was consigned to me by the Berlin Acclimatization Society, I was of opinion that this bee was of little or at most of only slight importance in a scientific point of view, for I supposed then that whatever was to be learned of the proposed mysteries of the bee had already been revealed by means of the Italians. Now, however, I feel assured that the future of apistical theory pertains to the Egyptian bee.

Very soon some of the Egyptian queens became fertilized by drones. The workers produced by these queens were not perceptibly larger than the pure Egyptian workers, and in other respects still resembled the Egyptian type very much. The drones produced by these queens—since impregnation exerts no direct influence on them—were still pure Egyptian. I now raised some young queens from these impurely fertilized mothers, and employed the Kohler process to secure their fertilization by black drones. According to the experience derived from crossing the black bee and the Italian, the workers produced by such queens should have been numerically one-half black bees, and the other half Egyptian. But when the hybrid workers made their appearance, our anticipations were not realized. The hybrids diverged in two directions indeed, but the parental markings showed themselves mingled or melted into each other, in a portion of the progeny. A portion of the workers resembled the Italian workers so perfectly, in color, size and characteristics, that no expert could distinguish them from pure Italians. Another portion of them still resembled the Egyptian bees, showing a black body covered with a grayish pubescence, and manifesting the constitutional characteristics of the Egyptians. These observations led me to suppose that, probably ages ago, the Italian bee may have originated from a cross of the black bee with the Egyptian. I communicated this conjecture to Dr. Gerstaker of Berlin and other friends. The latter received the suggestion with great disfavor, regarding it as derogatory and dishonoring the Italian bee, and it required no inconsiderable labor to convince them that the conjecture had no reference whatever to any supposed value or want of value of any variety of the honey bee, but was of a purely scientific nature; and that one variety might, in economic value still rank high above another, though it be clearly demonstrated to be of hybrid origin. Dr. Gerstaker informed me that he was unable to distinguish the workers produced by a cross of the black bee with the Egyptian, from the pure Italian workers; but that I had assigned no reason for my hypothesis, and that the geograpical distribution of the honey bee militated against it. I then again carefully studied the excellent little treatise by Dr. Gerstaker, on "The Geographical Distribution of the Honey Bee," and found that the geographical distribution of the races furnished no conclusive arguments either for or against my views. Here the idea occurred to me that the conjecture would attain to the highest degree of probability, if a hybrid queen of the second or third generation should be found to produce drones which could not be distinguished from Italians. Impatiently did I await the return of spring. The drones finally made their appearance and diverged likewise in two directions; one portion could not be distinguished from Italian drones, while another portion resembled the Egyptian drones in size, but having black bodies with grayish pubescence. I then raised young queens from an Egyptian hybrid queen of the second degree of degeneration, and arranged to have them fertilized by drones derived from the same mother, but bearing Italian markings. The workers produced by these queens resembled the Italians, while the drones diverged in the two directions adverted to. I now proceeded to breed in and in from the hybrids thus obtained, and in the third and fourth generations all the drones bore the Italian markings. It might here be objected that, on ataval principles, these hybrids must revert to their distinct parental or primal races, as is the case with hybrids of the black bee and the Italians. But I have now before me black Egyptian hybrids of the nineteenth generation, and these still retain their characteristic markings unchanged alike in queens and drones and workers, though rather intensified in degree and permanence. Firmly established, therefore, do I regard this fact—from a cross of the black bee with the Egyptian, a hybrid is produced which no man can distinguish from the Italian bee.

Now what do these observations teach? For brevity's sake I will express the question thus: Did Divine Omnipotence, when placing the animal creation upon the earth provide in each case only one primitive pair; or did He create each race at once in larger groups? And if the latter, were all the animals of the same class perfectly alike as regards size and color? Or did God create directly the different races of the honey bee? When we reflect that no mortal eye witnessed the grand act of creation, and further consider that no reply can be deduced from any known laws of nature, they may be regarded as highly presumptuous. But the arrogance apparently involved in them vanishes at once, when I state that I have not deduced the reply from my own mental cogitations, but from facts with which I became acquainted when crossing the common black bee with the Egyptian. My observations constrained me to accept two primitive races for the honey bee. A portion of each of these races certainly existed since the dawn of history, and these I denominate original or primary races. In the course of time others arose from the crossing or intermixture of the primary races, and these I call derivative or secondary races, or varieties. The black bee and the Egyptian I regard as primary races. The Italians, Cecropians, Syrians, Chinese, etc., etc.—"who can count the peoples? who name their names?" all these are nothing more than the hybridous product springing from the two original races—mere derivative or secondary races. I venture to say that if all these mixed products be entirely removed, leaving me only the pure black bee and the pure Egyptian, I could speedily reproduce any desired secondary race, by crossing those two primaries. Possibly, the strikingly black honey bee of Madagascar may yet prove to be another primary race.

3. Crossing the Italian Bee and the Egyptian.—What has hitherto been said is of subordinate importance, so far as regards the production of an improved breed; because it refers only to the color or markings, which it may be thought desirable to give to the improved breed. But of higher and more practical importance is the solution of the questions, is the constitutional temperament of one race transmissible to another? And if so, is this to be effected by means of the queen or drone? or, again, do the constitutional properties of the two races or varieties become so commingled or melted into each other by the cross, that new and special constitutional properties are the result? In breeding we have hitherto relied mainly on the queen. We said—"this is a choice, populous colony, with a fine prolific queen, therefore, we must use some of its blood for raising queens." But I do not believe that in the endeavor to procure an improved breed, it is sufficient to have regard only for the qualities of the queen. According to my observations, those of the drone, too, must be taken into account.

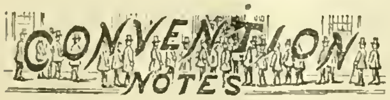
In order to accumulate facts, it became necessary to cross the Italian bee with the Egyptian, because these two are the exact counterparts of each other, as regards constitutional characteristics—the Egyptians having a fiery temperament, while the Italian is of a placid and gentle disposition. The first inquiry was: Does the temperament reside in the seminal filament, or in the egg? In other words, is the seminal filament the germ of the young bee, or is the egg?

When first the seminal filaments were discovered in the generative fluid, it was thought that each was the incipient germ of a nascent creature, and that the young animal is nothing more than a fully developed seminal filament. Accordingly, it was assumed that the egg only contained the requisite nutriment for the sustenance and development of the seminal filament. Now, if this were in reality the germ of the nascent creature, the constitutional properties must be inherent in the drone. But every bee breeder is aware of the fact that an unimpregnated queen lays eggs which produce drones exclusively; and he further knows that worker bees occasionally lay eggs from which living creatures are developed, and that these are invariably drones. From these facts it is evident that the egg contains the germ of the young bee. Let us now inquire what observations and experiments further teach. I crossed pure Egyptian queens with Italian drones. In the hybrid progeny, the constitutional properties—the temperament—of the Egyptian seemed completely obliterated, as it were, and those of the Italian substituted. I next crossed the Italian queens with Egyptian drones, and the progeny displayed the Egyptian characteristics wholly. Hence, it was manifest that the temperament of the bee resides in the seminal filament. Accordingly, in our endeavors to provide an improved breed, our attention must be pre-eminently directed to the drones by which the selected queen is to be fertilized. We come now to the question whether drones possess diversities of temperament, but the elucidation of this branch of our topics would occupy too much time at present. I may perhaps have occasion hereafter to discuss it.

Some may dissent from the views I have here expressed, but we cannot disagree in our object, namely, by steadfast endeavor and close scrutiny to attain to the knowledge of the truth which the Omniscient has embodied in this very diminutive member of animated nature—the honey-bee.

Now, as Vogel has proved beyond a doubt that the yellow race of bees is not a primary race, but has been produced in all its varieties by crosses between the Egyptian and black bees, it makes it easy to see why the Italian is so gentle and so prone to run out into the black bee. The Egyptian bee was probably brought into Europe some thousands of years ago. Virgil tells in his pastorals, that there were two distinct races of bees there in his time (that was in the time of Julius Cæsar), and that the yellow race was the best thought of; but as the black bee is a native of Europe, it results that the black blood in the Italian bee preponderates—there is more of it than there is of the Egyptian blood, hence, they are gentle, and the addition of a little more black blood makes them all black, as we have many times learned to our cost. I judge that the Syrian, Holy Land and Cyprian bee were originally produced by a cross between the black bee of Europe and the Egyptian, but in their case, I take it, that the Egyptian blood predominates; the queens are small, they are very light in color, and their disposition, in many cases, resembles the Egyptian more than any other race. In fact, I am perfectly satisfied that is just where they obtained it.

Binghamton, N. Y.



For the American Bee Journal.

Caledonian Apiarian Society.

This Society held its ninth exhibition in connection with the Highland Agricultural Society's Show, in the King's Park, Glasgow Green. It occupied two large marquees in the south-west corner of the yard.

Every exhibition seems to be advancing always on the preceding one, both as regards the number of entries and the quality and quantity of the hives, bee furniture, etc. The entries numbered upward of 100, exactly double that of last year, when the show was held in Stirling. Not only did the entries show an excess in number, but the quality of the exhibits were of such a character as to denote the distinct advances being made in the science of apiculture. A few of the sections and supers on exhibition were under the prescribed weight, which suggested the fact that the season has not been favorable for the production of honey.

Passing into the largest marquee, we find the centre of attraction to be in the observatory hives, which were placed along the north side of the tent. As the greatest interest was manifested in this class, I shall give a brief account of it:

In this department there was a keen competition, the first prize falling deservedly to Mr. D. Wood, Benmore via Greenock, whose hive was noticeable both for its ingenuity and beauty. It consisted of four frames double-hinged, folded together and set at proper distances, so that there is no possibility of bee-crushing. When folded together it occupies 11x17x24 inches in height; when expanded it is 2 ft. 7 inches, into the shape of a W, so that the eye sees everything that is going on. All the necessary operations can be done by drawing the ends and top. The glass doors and top at each side are made to fold, when open to form the sides and top. The frames atttched to the end, which when drawn out exposed them fully 14 inches. It is made to revolve on a foundation which is so arranged that no single bee can be crushed. It will at once be seen, when closed, the bees are in a perfectly natural condition for all the operations of bee life, without loss of heat or inconvenience.

In addition to the above, it is so arranged that a crate of sections can be put on the top, in which the bees enter most readily. The excluder zinc is so arranged that the queen cannot ascend the super, which presents a very pleasing appearance. In short, this is a hive which meets the conditions laid down by the Society, being a perfect hive for both summer and winter use, and having all combs visible on both sides.

Mr. James Johnstone, of Touch via Stirling, came second with a very nice hive, which has seven bars in number. These were of the Woodbury size, arranged in a row, and standing parallel to each other. These, working on a pivot, opened out like the leaves of a book, while the bees found their way to the main channel down the centre of the pivot.

Mr. Wood also exhibited another two leaved hive, which had six frames. It was well stocked, and also a great source of attraction.

Mr. Johnstone gained the first prize for the best colony of British bees, which he exhibited in a six-bar Woodbury hive, which was well stocked. In it the frames were arranged in two perpendicular rows, showing artificial comb foundation in the various stages of extension up to the complete cell.

Mr. Young, of Perth, came second, with one almost exactly the same, which was also well stocked.

Mr. Sword, of Falkirk, came third, which were exhibited in a single leaved hive, and contained four frames. This was also well stocked.

These were entries for the best colony of foreign bees, but as none of them were perfectly pure, the judges made no awards.

In the class for hives, the competition was very keen; they were all of a superior kind, both as to workmanship and design, the bar-frames making a splendid display by themselves. For the best collection of hives, bee furniture, etc., Mr. Young gained first prize, Mr. Steele, of Dundee, coming second. Both exhibited very interesting collections of everyihing connected with apiculture, even from a needle to an anchor. There was also a good display of various sized supers, comb foundation and samples of wax. In the honey classes the quality shown was of high merit. For the best super above 20 lbs., Mr. Anderson, of Stevenson, carried off the first prize, while Mr. Crawford, of Arran, came second. Both looked remarkably well, so much so, that both were bought immediately after the judging.

All the other classes, which were glasses and small supers, were well competed for. Mr. Sword gained the first prize for the best exhibition of extracted honey in two pound glasses, while Mr. Templeton took first prize for the best comb honey in small sections.

Mr. Sword was awarded first prize, and Mr. Scott second prize for the best honey cakes, which were "very tasty."

Mr. Young was awarded 3 prizes of merit for various honey extractors which he exhibited, proving a good source of attraction.

Mr. Wood gained first prize for his fine display of honey producing plants, exhibited in a dried state.

Passing out of this tent we find ourselves enclosed in a smaller canvas, one (which has been several times illustrated in the BEE JOURNAL), and which was the scene of great interest during the show. Manipulating was carried on daily, while the public were protected by a gauze-screen. Driving bees from a straw skep and transferring their combs and bees to a bar-frame hive, were performed at intervals during the day and never failed to astonish the many visitors, who seemed amazed at the easy manner in which the bee master could handle them, like flies.

The following gentlemen acted as judges: Mr. Cowan, Horsham near London; Mr. Wilkie Gourock, Mr. Patterson Struan, and Mr. Garvie Bridge, of Earnwhile. Bailie Laughland, of Kilmarnock, acted as Umpire.

The weather throughout was very wet with the exception of the last day (Friday), otherwise the show was a great success.

JOHN D. HUTCHISON, *Sec.*

The National Convention.

The North American Bee-Keepers' Society will hold their 13th annual meeting at Washington Park Hall, Cincinnati, O., across Washington Park from the Exposition building. Time, Oct. 3rd to 5th, 1882. First session Tuesday, 10 a. m., Oct. 3. We are encouraged to hope that this will be a very profitable meeting, as we are promised papers from, and the presence of, a large number of our most prominent bee-keepers both in the United States and Canada, and essays and implements of the apiary are expected from abroad to add to the knowledge imparted by the research and inventive skill and methods of our countrymen.

EHRICK PARMLY, *Sec.*

New York, July 12, 1882.

☞ The Central Michigan Bee-Keepers' Association will meet Sept. 19th, at Lansing, in the Capitol Building. We call the meeting two weeks before the Annual Fair of the Central Michigan Agricultural Society meets, for the purpose of making the final arrangements for a large exhibit of bees, honey and apiarian supplies. A cordial invitation is extended to bee-keepers everywhere. The meeting will be of especial interest, and a large attendance is expected.

E. N. WOOD, *Sec.*

To all Bee-Keepers in Iowa.—At the next annual meeting of the North American Bee-Keepers' Society, to be held Oct. 3d, in Cincinnati, Vice Presidents are expected to report the status of the industry in their respective States. This can only be done by the help of bee-keepers in different parts of the State, and I wish that every person interested in bees would, as soon as they see this notice, send me by postal or letter a report of the condition of bee culture in their section, from the close of last year's honey season until the present time. I hope all who see this will respond, as I will not even attempt to make the report expected of me, unless I have sufficient information so as to make a reasonably correct one.

O. O. Poppleton,
Vice P. for Iowa.
Williamstown, Iowa, Aug. 25, 1882.

☞ The Kentucky State Bee-Keepers' Convention will meet in Louisville, Ky., at the Exposition Building Press Rooms, on Tuesday and Wednesday, Sept. 26th and 27th. All bee-keepers are invited to attend, and send essays, papers, implements, or anything of interest to the fraternity. The Exposition will be in full blast and cheap. Railroad rates from all points. W. Williamson, *Sec.*

☞ The Ohio State Bee-Keepers' Association will meet in convention in Columbus, on the Fair Grounds, during the week of the State Fair; meetings to be held on Thursday and Friday, Aug. 31 and Sept. 1, 1882. Rooms have been provided in the Fair Grounds for the use of the Association. A full attendance is requested of all who are interested.

Daniel Spear, *Sec.*
Cardington, O.

Local Convention Directory.

1882. *Time and Place of Meeting.*

Aug. 31—Ohio State, at Columbus, O.
Daniel Spear, Sec., Cardington, O.
Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.
19—Michigan Central, at Lansing, Mich.
E. N. Wood, Sec.
26, 27—Kentucky State, at Louisville, Ky.
W. Williamson, Sec., Lexington, Ky.
28—Norfolk, Ont., at Waterford, Ont.
Elias Clouse, Sec.
Oct. 3-6—North American, at Cincinnati, O.
Dr. Ehrick Parmly, Sec., New York City.
5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.
Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.
Nov. 1—New Jersey & Eastern, at New Brunswick.
J. Hasbrouck, Sec., Bound Brook, N. J.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ The Bee Journal is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

SELECTIONS FROM OUR LETTER BOX

Clipping Queens.—1. In handling brood frames, does it hinder the bees or disturb them to place the frames back promiscuously? 2. What is the safest way to clip queens' wings? I notice the usual way is to clip one wing only. 3. Why not clip both? 4. Is there any danger of injuring the queen by too close clipping? Quiz.
St. Paul, Minn., Aug. 21, 1882.

[1. It may cause momentary confusion, but no harm if they are placed back with the brood in the center.

2. Lift the frame with the queen and stand it down or hang it, so as to leave both hands free; with the thumb and fore-finger of the left hand deliberately catch hold the end of one primary wing, and lifting out gently, with a sharp pocket knife cut off about one-third.

3. Because she can make a better attempt at flying with the ends of both wings clipped, than if a third of only one is taken off.

4. Yes, where both wings are cut close, as she is more helpless. If she is jostled off the comb by the bees, as is sometimes the case, she has more difficulty in regaining her position.—Ed.]

Preference for Catnip.—Bees were on the verge of starvation here till about June 1st, and then it was too wet, so that the nectar was too thin. July showed the "silver lining," however, and August has turned the silver to gold. My first swarm came June 30th; now, from 17 in the spring, I have 54, but the increase came from 13 colonies, and two wild swarms caught. From one Syrian colony I have now 11, and all doing well. Increased mainly by natural swarming, but also divided and formed several nuclei, that have now grown into full colonies. A Cyprian colony I divided, and 5 days afterward, the new colony swarmed, and they have continued to swarm nearly every day this week. I let the last swarm hang in a tree till I tore out all the cells, but found the colony was still so strong that I hived the swarm by itself. The cells were in bunches and the children took from them half a dozen fine looking and lively queens. I filled all frames half way down with foundation, and sometimes they were all drawn out and contained honey, pollen and eggs in less than 24 hours. I have one queen with 19 frames of brood, and nearly every upper story has been badly brooded. Have only taken about 150 lbs. of extracted, and have about 100 lbs. of comb honey nearly ready, but white clover, red clover, alsike, melilot, catnip, smartweed and buckwheat are yet in profusion, and will be till frost. If there is any plant that I feel sure it will pay to plant for honey alone, whether the season be wet or dry, it is catnip. I cultivated it this year, and shall plant all I can another season.

Wm. Camm.
Murrayville, Ill., Aug. 19, 1882.

Bees and Amber Syrup.—After an absence of about 2 years, I will again ask space in the Bee Journal to inform its numerous readers what the prospects are in this part of Missouri. I began the season with 100 strong colonies, besides some 20 nuclei that I brought through the winter. I left my bees on the summer stands, and they all came through without any loss. I have now over 200 strong colonies, mostly Italians and Cyprians. This has been the finest honey season I have ever seen—one continual flow from March up the present, and the prospects are very fine for fall honey. I have taken off 1,500 lbs. of box honey, in 1 and 2 lb. boxes, and about the same of extracted, and expect as much more. I am putting up an apparatus for manufacturing syrup and sugar from early amber cane, do you think the bees will trouble any; I have heard that they will, but I would like to hear from you? I consult the Weekly Bee Journal with interest, and hope it may continue its weekly visits for many years yet to come.

J. L. Smith.
Lawson, Mo., Aug. 15, 1882.

[We are afraid you will experience considerable annoyance from and with the bees on account of your amber sugar works, especially if there should be any interruption in the honey flow.—Ed.]

Bees Booming.—We have had no surplus honey from our bees for three years. But about a week ago they commenced "booming," and I now look for a good fall crop. I have 60 colonies in excellent condition, mostly with upper stories full of comb.

J. W. Green.
Chillicothe, Mo., Aug. 19, 1882.

Less than an Average.—The peculiar honey season is still continuing. On the 18th or 19th of July a heavy flow of honey suddenly commenced, and continued without interruption until the 30th, when it just as suddenly terminated. I obtained a surplus of about 50 lbs. of honey per colony during that short flow. Since July 30th, honey has been coming in so slowly that robber bees have troubled us very much about our work. Fall flowers are just commencing to bloom, and if we should be fortunate enough to have a month of fair weather yet, may make a medium crop; but I do not think it at all probable that we can get what I call an average crop, viz.: 100 lbs. per colony. Please send us a portion of that "cloud with a silver lining." We would give it a most hearty welcome, I assure you.

O. O. Poppleton.
Williamstown, Iowa, Aug. 15, 1882.

Seeding an Orchard.—I have an orchard of three acres of trees, 12 years old, set 22x26 feet apart, now seeded to mammoth red clover, the heavy growth of which is likely to injure the trees. I wish to make a bee pasture of the orchard, how shall I proceed? The clover is now ripe and full of seed, besides the ground has seed in it from last year. Soil is common black loam, and quite level. We are three miles from any timber, and five from town. Land is worth $75 to $80 per acre. About one-half of the fences are Osage hedge, and this is full of catnip. A. H. HOLCOMB.

Pecatonica, Ill., Aug. 20, 1882.

[Cut the red clover and plow the stubble under as usual, then in early spring seed the orchard down with white clover. This will make excellent sheep, hog and calf pasture, and a very good range for bees. We would advise seeding down to sweet clover, but its rank growth on good loam would make it quite as objectionable to the orchard as the mammoth red clover, as it would attain a height of six feet or more.—ED.]

Excessive Swarming.—This season has been one of the most favorable of all seasons for breeding in this locality I ever experienced. Larger swarms I never saw; hives full and running over continually. Notwithstanding all the precaution taken to prevent them from issuing, they would come forth pell-mell, with mated or virgin queens. I have given room with surplus and breeding capacity to no avail. I have practiced destroying queen cells: in short, have done everything I ever read of or knew to prevent them from swarming and failed. Do you know what is the matter? With the exception of two days since the latter part of June, until to-day, I have hived from 1 to 9 swarms. I am using the Langstroth hive, an eight frame hive as modified by James Heddon, with his surplus arrangement, which I like. I must give you my experience with a large swarm. Five issued at one time and clustered together. I have one-third of one of the primary wings of every queen clipped, consequently, I captured four of those queens and returned them to their respective hives. The other one could fly enough to accompany the bees. They were directly over my bee garden or apiary, comprising 100 colonies of bees. I attempted to ascend twice to take them, but was nervous about it, in consequence of their becoming very much irritated on account of the uproar produced by the swarming, and gave it up to contrive some other means to get them, as I did not want to lose 5 Italian swarms in 1, with a good queen. The size of the cluster being about 4 feet long and 16 inches in diameter. As it was about 30 feet high, I concluded to try what virtue there was in powder and shot. I requested a young man in my employ on the farm to get the gun and shoot through them. He did so the third time. You may guess there was a dislodgement of the bees to my satisfaction. With the exception of what were killed (perhaps enough for one swarm), the balance with the queen settled on an apple tree about 6 feet from the ground, and I saved and hived them in their original homes with their mothers.

DANIEL WHITMER.

South Bend, Ind., Aug. 17, 1882.

[This season has been a peculiar one regarding swarming, some bee-keepers reporting it without a precedent. We have known several cases of swarming from 3-story Langstroth hives, wherein were 30 brood-frames, and the majority containing more or less brood. Your trouble has been augmented somewhat by using only eight frames in the lower story; but we doubt if double that number would altogether have repressed their swarming proclivities. A bee-keeper of our acquaintance, in this city, who has long entertained the opinion that a long-idea hive could be constructed which would prove a non-swarmer, having occasion to absent himself from the city for several weeks, constructed some of that class, and was so sanguine of success that he disregarded our advice to clip a wing of each queen. Now he mourns the loss of several of his best queens, which were accompanied by rousing swarms. In no instance were even all the foundation frames drawn out when the bees absconded, and he doubts the correctness of his theories.—ED.]

Cyprians Beat all the Rest. — Two years ago this fall I obtained 2 Cyprians and 1 Italian queen. I lost one of the Cyprians the first winter. The other beats all the rest of the bees combined. The first year they cast 7 good swarms. This year one colony has cast 6 swarms. I doubled up four and made two, so as to have them strong. They are the best workers I have. As there is some inquiry about them, I will say they have done well for me. I have taken from three colonies about 65 lbs of honey each, and will get 40 lbs. more from each this season, of box honey. From one colony of my old strain of bees, I will get about 160 lbs. of box honey. I have now 105 lbs., and they are good for 55 or 60 lbs. more. Out of my 45 colonies, 26 have done all the swarming this year. I have sold two, doubled up some, and some swarms went together. I now have 78 colonies, all doing well. Bees in this section are doing very well, although the spring was wet and cold, which made them rather late in swarming; but when white clover came they went into it with a rush. I put off swarming as long as I can, so as to get large swarms, when I can get honey in abundance.

THOMAS LASHBROOK.

Waverly, Iowa, Aug. 22, 1882.

Never saw a Better Honey Harvest.—The "silver linings of the clouds" reached here July 10th, and I never saw a better honey harvest in this country than it has been since that time. I inclose two honey plants, please give name and value. The small red flower grows in the timber land, and the bees work on it all day. Even where there is but one plant, I find it covered with bees. The yellow flower grows on the bottom land, and is a great favorite with the bees.

E. DOTY.

Macksburg, Iowa, Aug. 15, 1882.

[The small red flower is figwort or Simpson honey plant; the yellow flower is a solidago, to which class the goldenrod also belongs. It is needless, after giving the names, to say more in commendation of them as honey plants.—ED.]

Recapping a Queen Cell.—On the 10th inst. I had a swarm of bees come off. I went to the old hive and took out all the queen cells but one, laying them in a box which I put in the shop. On the 14th I came across them, and commenced to open them with my knife. I found a large one which I cut open, but seeing a grub-looking thing which moved a little, I put it in a queenless colony, grafting it in a comb, then awaited results. The next day at noon the cell was built out again and capped over, and to-day a fine, lively queen came forth. We are getting up quite an interest in bee-culture around Bushnell this season. All bee-keepers here appear to be doing well, and are taking off lots of honey.

NATHAN M. WOODMAN.

Bushnell, Ill., Aug. 22, 1882.

Best Honey Flow of the Season.—We are having the largest and longest honey flow of the season. With 10 days more of this weather, it will exceed in bulk all the rest of the season's crop. Bees are swarming daily; I had three swarms yesterday, but put them all back, thinking that the best course to pursue.

GEO. E. HILTON.

Fremont Center, Mich., Aug. 23.

Swarming Perplexities.—We have had a singular season so far, with but few days at a time that bees could get honey, on account of rains. We have had plenty of flowers, but the rain washes the honey out in a day or two; but more flowers come again. I have had a singular experience with swarms this season. Heretofore they have waited for each other—not so this time, for I have had as many as four out all at once, before I could get the first one hived. I attempted to divide, but sometimes some would get no queen, and so would go back. A second swarm came out before I had the first one half in; they went in with the first one without settling anywhere. I have lost over $50 worth of swarms by absconding. All were Italians but one, and that rose high in the air and bid me good-bye. I have sold 3 colonies for $23.50, and have 9 left. I have not taken over 200 lbs. of honey. It may be we will have a good fall season.

JOEL BREWER.

Lincolnville, Ind., Aug. 15, 1882.

Honey-Dew.—We are having the sweetest time ever known in this county. No honey-dew before this has ever furnished a parallel. The bees are swarming, very rich, and stinging everything within fifty yards. I have been intending to call on you during this month, but will not be able to do so until next month. Please give us the philosophy of honey-dew.

WM. T. STURGILL.

Pickering, Mo., Aug. 19, 1882.

[The cause or origin of honey-dew has been a matter of much discussion and diversity of opinion among scientists as well as apiarists, one class holding that honey-dew is a juice or liquid which oozes from the leaves of trees and plants under certain atmospheric influences; opponents maintaining that it is an excretion deposited by small insects (*aphis*, or vine-fretter). Both parties are undoubtedly correct—*i. e.*, there are probably two qualities of liquid, both termed honey-dew, and each having its origin as given above. It would require much more space than we can devote, to attempt to discuss the "philosophy of honey-dew."—ED.]

Eleven Colonies from One.—Starting in with one colony of blacks and hybrids last season late, I divided them this spring, and by swarming and dividing since, I now have 11 strong colonies doing splendidly. I have taken off some surplus, and the honey is superior to any I have ever seen west of the Mississippi. I never knew bees to increase so rapidly as they have the past few weeks. My experience in making the test satisfies me that this is a most excellent locality for bee culture, and if the winter proves as encouraging as the past season, I shall devote my whole time to apiculture in future.

WM. W. EASTMAN.

Yankton, Dak., Aug. 19, 1882.

Corn Tassel Honey.—I mail you sample of honey—what is it gathered from? I think it is corn, or is it buckwheat, or what? Bees are very busy, but I do not know what they are gathering from.

R. S. PLOPPER.

Bartlett, Ill., Aug. 23, 1882.

[It is as pure a sample of corn tassel honey as we ever saw, but is rather thin.—ED.]

Not Doing Well.—Bees are not doing well in this section, too wet, cold and a scarcity of flowers. White clover seems to be abundant in the Mississippi bottoms, but too far off for my bees

J. SMITH HEAD.

Benton, Mo., Aug. 19, 1882.

Cellar for Winter.—I wish to get your advice about wintering bees in my cellar, which I had intended for that purpose. The cellar is 32 feet square; the part intended for bees is partitioned off 14 feet on the north-side with flooring; there are two windows, one in the north and one in the east. It is ventilated with a pipe running into the chimney. Would this be a good place for wintering bees, and how should they be prepared? I have 34 colonies. Last week, in examining my bees, I found a strong colony queenless, with no brood except that which was capped. They had several queen cells, some capped and others not. I caged a young laying queen and put her between the frames. The next day I drew the slide, and on the following morning the young queen was lying at the entrance. I opened the hive and found fresh laid eggs; on looking further, I found an inferior queen. I pinched her head and introduced another, and now all is lovely. Where did the queen come from?

Hebron, Neb. F. E. ROPER.

[The cellar you describe ought to be satisfactory for wintering bees in, if you entirely darken the two windows, and if free from jarring. When you put the bees away for winter, lift the covers entirely off, spread thin blankets loosely over the top, put one-inch square sticks crosswise, and stack the hives up as high as you can reach conveniently. It is a good plan to alternate the entrances—that is, face one hive one way, and the next face opposite alternately through the stack.

The inferior queen was undoubtedly in the hive when you first looked it through, and the bees nursed the cells with a view to swarming.—ED.]

A Slight Mistake.—On page 524 you made a slight mistake in the thickness of the worm I sent you. It should have been ¼ instead of ⅛ of an inch.

S. C. FREDERICK.

Coal Vale, Kan.

Not so Bad.—Hearing so many poor reports from this State, this season, in regard to the honey crop, I thought I would give you my report up to date. From one colony I have already taken 130 pounds of choice white clover, all finished complete, besides 12 lbs. more unfinished, and several others have given me over 100 lbs. to the colony. I ran 28 colonies for comb honey, two of which superseded their queens, thereby giving me but little surplus. I have obtained in all, from this number, 2,000 lbs. of what I call choice honey.

G. H. ADAMS.

North Nassau, N. Y., Aug. 16, 1882.

Oregon for Bees.—Bees in this locality are very rich with stores in brood chambers, but few colonies have gathered a surplus in supers. Should fall harvest be good, a surplus in sections will be finished, and some experienced bee men will extract. Bees, generally, are in fine condition. I am looking forward to run an apiary near Portland, Oregon. What is your opinion of that country?

C. S. NEWSOM.

Athens, O., Aug. 20, 1882.

[We have been informed Portland, Oregon, is an excellent locality for bees, but know nothing of it personally.—ED.]

Sweet Clover.—How many acres of sweet clover will be a fair estimate for 50 colonies of bees?

H. J. NORTHRUP.

Lansingburgh, N. Y.

[We have no means of knowing with any degree of accuracy, as the growth with us is spontaneous and scattering; but think ten acres would be ample. This, then, could be partly mowed in July, so as to have one-half in bloom while the remainder went into its first seeding, which usually takes place in August.—ED.]

Crossing Stock.—Should an Italian queen meet an Italian drone for fecundation? Would it make any difference in stock if she should meet a black drone?

F. F. GRAVES.

Waterville, Me.

[If an Italian queen meets a black drone, her worker and queen progeny will be hybrids, and hence impure and unfit to breed from. If Italian bees are wanted, she must meet an Italian drone.—ED.]

Cleome.—I inclose sample of bloom that our bees have been working on very industriously for over three weeks. By giving its name and value as a honey plant, you will greatly oblige.

A SUBSCRIBER.

St. Joseph, Mo., Aug. 23, 1882.

[It is Rocky Mountain bee plant (*Cleome integrifolia*). As a honey plant, in our judgment, it ranks second only to sweet clover.—ED.]

Sowing for Honey.—1. Will it pay to sow good, high, well-drained grain land for bee pasturage? 2. How much of such land should one sow to keep a hundred colonies? It is a very poor season for bees in this vicinity, and they are not likely to have enough to winter on without feeding. We find the BEE JOURNAL a great assistance.

IRA ORVIS.

Pickering, Ont., Aug. 20, 1882.

[1. Yes; we decidedly think it would, as most of the season it would be valuable for stock pasturage, especially if sweet clover, which would give 3 to 4 weeks of green grazing after everything else is winter-killed, and spring grazing would be a benefit to it rather than damaging.

2. Ten to twenty acres.—ED.]

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

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925 West Madison Street., **Chicago, Ill.**

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☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

◆

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Emerson Binders.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

◆

☞ When you meet with an accident, get a sprained ankle, or otherwise injured, don't go to the expense of sending for a doctor, but apply Kendall's Spavin Cure, and you will experience instant relief. 32w4t

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

Bingham's Smoker Corner.

Cyprians Conquered.—All summer it has been "which and t'other" with me and the Cyprian colony of bees I have; but at last I am "boss"—Bingham's Conqueror Smoker did it. If you want lots of smoke, just at the right time, get a Conqueror Smoker of Bingham. G. M. DOOLITTLE.
Borodino, N. Y., Aug. 15, 1882.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

HEADQUARTERS FOR
SWEET CLOVER SEED.
King of Honey-Producing Plants.

Sown early in the fall will bloom some the next season; blooms from June 10th until killed by frost (at least four months). Every bee-keeper needs sweet clover. See what James Heddon and H. W. Garrett say about sweet clover in the Bee Journal of Aug. 16, 1882. Have no old seeds—all this year's crop. It will grow on any soil, wet or dry. Will sell in bulk, or in small lots. Send for prices. **A. SNYDER.**
Clarksville, Albany Co., N. Y.

FOR SALE—An Apiary of 120 colonies, suitable for Extracted Honey. For further information apply to J. McINTYRE, Strathroy, Ont.
35w2tp

Italian Bees for Sale.

One to Forty Colonies of Italian Bees for sale cheap. Address, **OTTO KLEINOW,**
35w2t Detroit, Mich.

HENRY ALLEY, WENHAM, MASS.
Queens Worth $2.00 for $1.25.

Large, handsome and beautiful. Every one warranted as good in all respects as tested queens. No loss of queens by mail in my new cages—all go safely. Safe arrival and purity guaranteed. Italian, Cyprian and Holy Land Queens by return mail. No money required until queen is received.
33w3t

HONEY

For the past few years I have made this excellent food my leading article. Having the best established reputation in this city as a dealer in PURE HONEY direct from the Apiaries, enables me to obtain the highest market prices. Your consignments and correspondence respectfully solicited.

R. A. BURNETT, Commission Merchant,
Successor to Conner, Burnett & Co.,
28w13t 161 So. Water Street, Chicago, Ill.

PLYMOUTH ROCKS.—Exhibition Birds and Mated Trios a Specialty. Correspondence cheerfully answered. WM. H. BUSSEY, 131 Lake street, Chicago, Ill. 35sm9t

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., August 28, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for honey is quiet. Extracted brings 7@10c. on arrival. No comb honey on the market worth mentioning, prices nominal.

BEESWAX—Scarce, and brings 20@25c. on arrival.

C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The crop of 1882 is beginning to come forward, and so far very nice goods have been offered. Sales range at 18@20c. per lb.; one pound sections selling at the highest range, when well filled and white. Extracted, few offerings and demand light at 8@9c.

BEESWAX—25c. for prime yellow; dark 18@22c.

R. A. BURNETT, 165 South Water St.

CLEVELAND.

HONEY—There is no change in honey in our market the past week; 1-lb, white honey sells at 22c., 2-lb. at 20c.; second grade, 20c. for 1-lb. and 18c. for 2-lb. Extracted has not moved yet; nominally held at 12@14c.

BEESWAX—Scarce at 25@28c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—The market is firm for extracted and choice comb. Offerings and demand are light.

We quote white comb, 17@18c.; dark to good, 8@13c. Extracted, choice to extra white, 9@9½c.; dark and candied, 7@7½c. BEESWAX—28@30c.

STEARNS & SMITH, 423 Front Street.

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

ST. LOUIS.

HONEY—A fair movement in strained at 7½@8.—one lot of 25 bbls. reported sold at 8c. Some new comb (choice white clover offered), but little sold—held at 18@20c. per lb.; extracted quiet at 9@10c.

BEESWAX—Easier at 26@27c. for prime.

R. C. GREER & CO., 117 N. Main Street.

NEW YORK.

HONEY—No quotations reported.—ED.

BEESWAX—The market is quiet, with transactions limited to small lots, but prime wax is held firmly, with some Southern not offering below 28½c. Western, pure, 26½@27½c; Southern, pure, 27½@28½c.

D. W. QUINBY, 105 Park Place

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

—"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian, Cyprian or Palestine, $4: Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1wly.

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I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.

14w39t **J. S. TADLOCK.**

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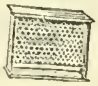
COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.



BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **25c.** per pound, delivered here, Cash on arrival. Shipments solicted.

To avoid mistakes, the name of the shipper should always be on each package.

ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL

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SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book.

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DEALERS IN
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65 *ENGRAVINGS.*

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Price 25 cents.—Sent on receipt of price, by

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925 West Madison Street, CHICAGO, ILL.

$777 A YEAR and expenses to agents, outfit free, address **P O Vickery Augusta, Maine.** 36wly

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1wly **D. S. GIVEN & C.,** Hoopeston, Ill.

FREE! FREE!

Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.

11w6m E. A. THOMAS & CO., Coleraine, Mass.

DUNHAM COMB FOUNDATION—40c. per pound; extra thin and bright, 10 sq. ft. to the lb. 48c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13wly

A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

925 W. Madison Street, Chicago, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

A Liberal Discount to Dealers the Dozen or Hundred.

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
1wly Hamilton, Hancock Co. Ill.

We now quote an

Advance of 5 Cents per pound

on the PRICES PRINTED IN OUR CIRCULARS, wholesale or retail. 15wtf

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THE CLIMATE,

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COLORADO,

will be promptly and truthfully answered by private letter, upon sending One Dollar to the

Woman's Industrial Association,
15w6mp 291 Sixteenth St., **DENVER, COL.**

Advance in Foundation.

The manufacturers of Comb Foundation have advanced the price 5 cents per pound, owing to the increased cost of Beeswax.

Until further notice, the price of all the styles and kinds of Foundation, except the VanDeusen (flat bottom), will be

Advanced 5 Cents per pound,

from the advertised price in my Catalogue.

ALFRED H. NEWMAN,
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Excelsior Dunham and Vandervort
FOUNDATION.

Owing to the large advance in the price of wax, I now quote prices thus: Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

J. V. CALDWELL,
3wly Cambridge, Henry Co., Ill.

1882. - ITALIAN QUEENS. - 1882.

I am now booking orders for my GOLDEN ITALIANS, reared from the best stock in the country. Warranted Queens, $1; Tested Queens, early in the season, $2.50; after July, $2; 2 frame Nucleus, with Tested Queen, $4; Full Colony, with Tested Queen, $10. The Best Quinby Smoker for $1.50. Address all orders to

L. J. DIEHL,
(Money Order Office)—Butler, Dekalb Co., Ind.
10wtf

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust an break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
13wtf Abronia, Mich.

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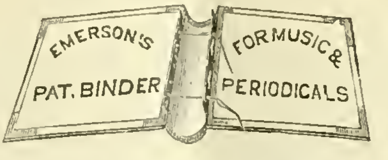
AND KEEP THEM

NEAT AND CLEAN.



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For Bee Journal of 1880	**50c.**
For Bee Journal of 1881	**85c.**
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This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist.*

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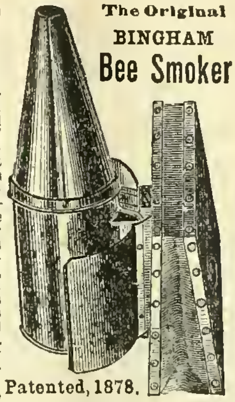

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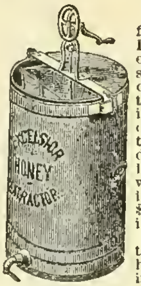

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DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

Vol. XVIII. Chicago, Ill., September 6, 1882. No. 36.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items....... 561
An Important Circular 561
Recognizing Bee Men at Fairs 561
The Weather in England 561
Sweet Clover—Its Culture....... 562
Statistics....... 562
The Northwestern Convention....... 563
The Weather this Fall....... 563
Fairs and Apiarian Exhibits....... 563
Instincts of Bees 563

Among Our Exchanges—

Controlling Swarms....... 564
Profits of Bee-Keeping....... 564

Convention Notes—

Local Convention Directory....... 564
The National Convention....... 564
Convention Notices....... 564

Correspondence—

The Width of Sections 565
Sale of Comb Honey—No. 2....... 565
Effects of Cold—Pollen Gathering, etc....... 566
That Bee Poisoning....... 566
How to Manage Robber Bees....... 567
Golden Honey Plant 567
Selling Honey to Advantage....... 567

Selections from Our Letter Box—

Wild Camomile Honey 568
Gathering Surplus Every Week....... 568
Bee Matters in Kansas....... 568
After Honey-Dew 568
Encouraging in Kentucky 567
Preparing for the Fair....... 569
Method of Dividing....... 569
Wiring Frames....... 569
Shipping Cages....... 569
Speed of Bee's Flight 569
Honey-Dew in Iowa 569
Manum's Hive....... 570
An Error....... 570
A Suggestion....... 570
Honey-Dew 570
Botanical 570
On the Wing....... 570
Large Increase....... 570
Too Much Swarming....... 570
Bees and Crops....... 570
Still Swarming....... 570
One Steady Flow of Honey....... 570
Notion Store....... 571
Seeding Basswood 571
All Right for a Full Crop....... 571
Plenty of "Strong" Honey....... 571
Bees are Boiling Over 571
Anticipates a Cold Winter....... 571
Prospects for a Good Crop....... 571
Mammoth White Clover....... 571
Quite Satisfied....... 571
Kept on the Jump....... 571
Fertile Workers....... 571
Done Well this Summer....... 571
The Best Honey Harvest 571
Gathering Sweet Clover Seed 571
Make a Home Market....... 571

An Important Circular.

On page 529, of the BEE JOURNAL for Aug. 23d, in an article entitled "Statistics on Bees and Honey," we made the following suggestion: "If the President of the North American Bee-Keepers' Society was to issue a circular to the several State Vice-Presidents, urging the importance and necessity for brief tabulated statements to be submitted to the Convention, and by their Secretary to be massed in a general statement, it would afford a useful and fruitful theme for discussion and legislation by the Society. These Vice Presidents could urge the matter upon the bee-keepers in their respective States through the bee papers and agricultural publications, and by means of public and private methods, and thus could be accomplished much more than can be done by any single enterprise. A correct and reliable report of this character would be a matter of national importance, and we believe can be accomplished only through the National Society." We are pleased to publish the following circular from Prof. Cook, giving the fullest indorsement to our suggestion, and officially calling upon them individually and collectively to render him most valuable assistance in making the National Society a means of benefitting the whole bee-keeping fraternity of the entire continent:

Vice Presidents National Association:

GENTLEMEN.—It is to be hoped that each Vice President will send a full report to the Cincinnati meeting from his State. Let this give the best possible estimate, founded on wide correspondence, of the crop for 1882, also the general condition of apiculture in your State. Give particulars of climate for the year, whether cold or hot, wet or dry, and the relation, so far as noticed, of weather to honey secretion.

Give any further notes as to items of interest or value that may occur to you. A. J. COOK, *Pres.*

Lansing, Mich., Aug. 30, 1882.

◆

Recognizing Bee Men at Fairs.—We all know how pleasant it is for bee men to recognize one another and have a pleasant chat. At the coming fairs let every one who has a badge wear it, and they will be surprised at the amount of enjoyment it will give them—introducing them to many they have wished to meet and have a pleasant interview, but with whom they have, perhaps, had no personal acquaintance. Just try it, for once, and surprise yourselves. If you have no badge, get one.

◆

The Weather in England.—The *Mark Lane Express*, in its review for the past week, says:

> The weather has been autumnal. A heavy rainfall was general Tuesday, but it was not sufficient to damage the crops materially. The outstanding crops, however, are endangered.

◆

☞ We will send sample copies of the BEE JOURNAL to any one who will distribute them to bee men at Fairs. We will also send some large colored posters to enable them to get up clubs. Write to us and say how many copies you wish and we will send them post paid. See our premiums for clubs on another page.

◆

☞ The Chesaning, Mich., *Argus*, of Aug. 18, mentions the receipt, from Henry Jones, of one of the finest sections of honey they ever saw. They say his bees are mostly Italians, and from one colony he obtained 100 pounds of honey in 24 days exactly.

Sweet Clover—Its Culture.

Again do we have occasion to thank James Heddon for giving us a text on which to write an article devoted to sweet clover (*Melilotus alba*), and its virtues as a honey plant. Aug. 27th he writes:

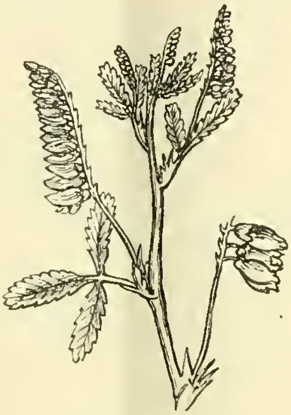
> Please tell us in next number all about spring *versus* fall planting of melilot, and the best way and time to do it in both seasons; how wet land it will do well on, etc.

We will preface the reply with the remark that our facilities for testing the various methods of cultivation, diversities of soil to which it is best adapted, manner of planting, quantity of seed per acre, and other minutiæ, have personally, been somewhat limited and we are obliged to rely upon casual observations combined with information derived in answer to thousands of inquiries which we have propounded to reliable men of experience in different localities, where soils, climate and other characteristics would be as varied as possible. Of course, residing in a city like Chicago, we have not had an opportunity to carry our experiments with it to the extent we would like to have done were we differently situated; and yet we feel perfectly convinced of the correctness of all the conclusions we have arrived at.

Several years ago our attention was drawn to the sweet clover by observing myriads of bees working on it immediately succeeding a rainstorm, when not one was at work upon the white clover, owing to the storm having washed out the nectar, or, perhaps, the excess of water remaining in the clover heads. From that period until the present we have closely observed it, and never has it failed in its nectar secretion after the flow first commenced, nor has the abundance of the crops been retarded by atmospheric influences. Last season, which was one of unusual drouth following a remarkably severe winter, the sweet clover was very abundant, very rich in nectar, and very heavy with seed; but owing to the short spring and premature summer, it shed its ample growth of bloom in the first of August, unloaded its crop of seed, and came out in second bloom about the 10th of September, remaining in bloom till the advent of winter, and in some instances we shook the snow covering from standing brush and gathered the still fragrant flowers.

As is the case with all biennials, the later summer or fall is the natural period of seeding; but the natural requirements of the seed are to some extent, or nearly wholly met by planting in late winter or very early spring, when the nights are still frosty and an occasional severe freeze assists to rot and burst the hull, allowing moisture to swell and germinate the kernel.

In November, 1880, we assisted the birds to scatter the seeds along the roadways and in the gutters of the less frequented avenues, and a fine crop of blossoms have since rewarded us for the little trouble. In February, 1881, we scattered the seed upon the snow, and it has grown finely. Seeds which we scattered in August of the same year, and others which fell from the plants during the same summer and fall, are now covering the ground with a dense, vigorous mass of green, with some promise of a crop of blossoms this fall. In April of this year we again scattered and raked in some of the seed, and it is now growing finely. To the contrary of this, we have conversed with two parties who themselves gathered seeds last summer and sowed them, but not a kernel has grown. It is possible they failed to cover them, and the birds devoured the seeds; or the weather may have been unfavorable at the time of planting. We would advise, whether planted in fall or spring, if possible, that they be harrowed in; or, still better, planted in drills three feet apart, with several inches of space between plants. Then, one year thereafter, put in an alternate drill, and the seeding and cultivation is completed for a lifetime. If planting is deferred till spring, the seeds should be covered, else the birds will be likely to gather them from the ground.



Sweet Clover.

[These stalks, of which there are from 5 to 20 to a single crown, often attain a height of six feet, and are very dense in branches, foliage and blossoms, from the roots to the top.]

As regards soil, we do not think any choice can be made. In portions of Ohio, we are informed, it grows luxuriantly and spontaneously on the sand-hills and ridges, and we have seen it quite thrifty in this State where white drift or wash sand prevailed, bearing before a bountiful crop of sand-burrs and beggar-lice. Around Chicago, where we have had most experience with it, the soil is low, wet and cold, composed of blue-clay, and just above the water surface for fully half the year. We are informed by parties cultivating it in Indiana, along the Wabash, that they grow it to great advantage in the river valley, where it is subject to frequent overflow, with a sand-bed soil; along the Mississippi Valley it does well in the American Bottom, and is frequently submerged for weeks.

We have no doubt it will thrive well in any soil where any vegetation can be made to grow, whether wet or dry, sand or loam, forest or prairie, north or south, rich or sterile; and we do not believe it ever fails in its honey secretion, except, perhaps, for a very few days. During its first going to seed, which generally occurs in August, there is no bloom for two or three weeks, but this can be obviated by mowing a portion of the field in the latter part of June or first of July, or grazing it till late.

* * *

Statistics.—Mr. R. McKnight, the efficient Secretary of the Ontario Bee-Keepers' Association, has addressed a circular to every member of that Society with important questions to be answered. This is worthy of being copied by every bee-keepers' society in America. Only in some such way can we ever hope to obtain correct statistics of the bee-keeping industry. The questions are as follows:

> How many colonies of bees did you put away in the fall? How many did you take out in the spring? How many did you lose by spring dwindling? How many did you lose from other causes? How many did you sell? How many have you at present? How much surplus honey did you take? How much of this was extracted, and how much comb? What hive do you use? Do you use comb foundation? How do you increase—by natural or artificial swarming? How did white clover yield? How did basswood yield? What is the yield this year compared with last?

* * *

☞ When changing a postoffice address, mention the *old* as well as the new address.

The Northwestern Convention.

It will be seen, by reference to our Convention notices and Directory, that the Northwestern will meet in Chicago on the 17th and 18th of October, 1882, in compliance with a resolution adopted at the last annual meeting, to meet during the last week of the Exposition, and give all an opportunity to take the fullest advantage of cheap railroad rates. The President, Dr. C. C. Miller, accepted the invitation extended by the editor of this paper, to meet in the AMERICAN BEE JOURNAL office. Should it be found, however, that more room is required, but a few minutes' delay will ensue to obtain a public hall. All bee-keepers of the Northwest, comprising the States of Minnesota, Iowa, Wisconsin, Illinois, Michigan, Indiana and Missouri, should make an effort to attend this Convention, and each contribute of his or her experience to make its sessions as interesting as possible. The last meeting was one of the most interesting and profitable we ever attended, and we look forward to much good being accomplished by the Northwestern Bee-Keepers' Society. The President, in a postal card dated Aug. 24th, says: "I am now taking off my thirteenth thousand of white sections," and be will, undoubtedly, tell the Convention how he done it. The Northwestern inaugurated the system of dispensing with long-winded essays, adopting, in lieu thereof, the experience feature—with a view of combining science and practice, and the comparative results. Do not forget the 17th and 18th of October.

The Weather this Fall.

Prof. Vennor was quite correct about the weather for August. He said that shortly after the middle of the month, we should have one or two "cold dips." The papers report that fires were kept up in the passenger coaches of the Chicago and Northwestern railway while passing through Iowa on the 17th, so cold was the temperature. He says as follows of the month of September:

First week (1st to 7th). Foggy weather will be experienced along the North Atlantic coast and Gulf of St. Lawrence, with thunder storms and probably sultry weather over the North Atlantic. Sultry and showery up to the sixth day. Cooler change night of 6th or on the 7th, with possibly frosts in New York State and Province of Quebec, Canada.

Second week (7th to 14th). Cooler and pleasant weather. Days varying from warm to sultry; evenings and nights generally cool. A favorable week in the majority of sections. Cold in mountainous regions. Probably a good deal of rain in Province of Quebec and Lower Provinces. Stormy on Newfoundland coast.

Third week (14th to 21st). A rather stormy and unsettled week, with frequent rain-falls. Windy weather probable in Gulf of St. Lawrence and North Atlantic. Fair, seasonable weather in the majority of sections. Wet in northern sections about 20th and 21st. Stormy and cold weather in England and Scotland.

Fourth week (21st to 28th). Temperature probably fall-like. Windy with very cool evenings and nights (probably frosty) in Northern and Western sections. A good deal of rain in Northwest and Western States. Stormy and wet in Gulf of St. Lawrence and along North Atlantic coast.

Closing days (28th to 30th). In all probability wet and stormy in the majority of sections. Crop reports less favorable than expected. Wretched weather in Maritime ports and Newfoundland.—*Vennor's Weather Bulletin.*

His further prognostications are as follows:

October will be very similar to August, but of course colder. September is likely to be the counter-balancing month of this most unpropitious season, and during this month everything should be done that can be, to house things safely against further wet and storm. In the Northwest early cold and advanced snowfalls are likely to be the conditions, while in December the cold may be intense.

Bee men should take notice, and prepare early for a cold winter.

Fairs and Apiarian Exhibits.

About the middle of May last we forwarded, to the managers of the great St. Louis Fair Association, a list of apiarian articles worthy of competitive entry for premiums, and detailed at some length the benefit to be derived by the country, from a proper encouragement of the bee-keeping industry in the Mississippi Valley, as elsewhere. Those gentlemen have taken hold of the matter with an appreciative determination to work it up to its proper place, if they meet with support from bee-keepers themselves in the way of placing exhibits on the grounds worthy of encouragement. The initiative has been taken by them for the coming Fair, and, although the premiums are not as large as we had hoped they would be, still it is a great and most important advance in the right direction. We earnestly hope all bee-keepers, who can possibly make it convenient, will send in a full and complete outfit for competition, both of bees, honey and apiarian implements—everything that will awaken the curiosity and rivet the attention of the hundreds of thousands of visitors who attend that Fair, and in a few years, at most, we will see bee-keeping ranking with stock-raising, grain-growing, tobacco-producing, and other great pursuits in the West, and acknowledged as such by the Fair Association and the public.

Messrs. R. C. Greer & Co., who rank among the most prominent of the commission merchants of the West, have written us under date of Aug. 30, as follows, regarding this matter:

Our St. Louis Fair Association, for the first time, offers premiums on bees and bee products. While the premiums are not large, they imply a commendable effort on the part of the Association to assist in furthering bee-culture. We forward you, by mail, the annual catalogue of the Association, and call your attention to Class E, Department of Jellies, Butter, etc., in which your readers may take interest.

Best display of Italian bees, $20.
Best display native black bees, $20.
Best imported queen, $10.
Best display of comb honey, 25 lbs., diploma and $20.
Best crate of honey in comb, large silver medal and diploma.
Best display of apiarian implements, diploma and $10.
Best bee hive for all purposes, dip.
Best honey extractor, diploma.
Best wax extractor, diploma.
Best bee smoker, diploma.
Best honey knife, diploma.
Best bee veil or face protector, diploma.

Instincts of Bees.—Mr. J. M. Hicks in the *Grange Bulletin* argues thus on the above subject:

It is not easy to draw a line of distinction between the marvelous instincts of bees (as so-called by man) and the reasoning faculty of the human family. Reaumur, the great French naturalist, once observed a bee consultation over a large snail which had crawled into their hive. They went to work, and with propolis, a gum gathered from certain trees, and invaluable in their housekeeping, the bees first glued the snail shell to the glass pane of the hive, and then covered the whole mouth of the shell with a thick coating of the substance, hermetically sealing up their enemy and burying it alive. We ask, is this an act of instinct or of perfect judgment, emanating as it naturally does with man, if brought into contact with a loathsome object which he could not otherwise manage?

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

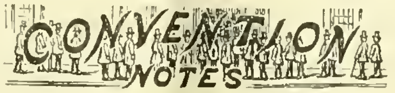
AMONG OUR EXCHANGES.

Controlling Swarms.—The *Grange Bulletin* says:

> It requires the patience of Job and a large amount of perseverance as well as hard work to manage a large apiary during the month of August, unless you use a good honey extractor, which will greatly assist in controling late swarming.
>
> We often find it a difficult matter to control the swarming fever of bees, if the buckwheat blooms and secretes honey plentifully during the latter part of August.

Profits of Bee-Keeping. — The Toronto *Mail* collates the following from D. A. Jones' correspondence:

> There may be saved $10.000 a year in every township from the keeping of bees. He would undertake to make more honey than any farmer in the world out of the same capital, and it would appear that this is no unwarrantable assertion. His expenses are: The cost of hire of the acre of land for each bee yard, equal to about $50 down to $4 a year; the cost of a cottage, $500 at the outside; annual interest on the two, $65; of interest on the capital represented by 620 colonies of bees at $10 each, $6,200, interest $620; interest on cost of extractor, foundation machine, tools, barrels, tins, etc., total cost say $1,000, interest, $100; wages and board of four skilled assistants for six months, say $1,200; extra help at extracting time, $100; giving a total outlay of about $2,100, nearly half of which is in the form of interest on capital which has grown up along with the business.
>
> Of course it will not do for everybody to rush into bee-keeping with an idea that he can make a fortune every year by it. Mr. Jones' success is the result of a lifetime of close and laborious investigation, of the most patient studying of the ways of insects, and a readiness to adopt and utilize the experience of others which very few men possess. An essential quality for a large apiarist is that he be an excellent judge of men.
>
> While it would be the most hopeless thing in the world for any person without experience to go into bee-keeping on a large scale, there is every inducement for embarking in the businss in a small way. Fifty colonies of bees could be made to yield 150 to 300 pounds of honey each, value $1,125 to $2,250. Colonies to the value of $50 a year could be sold, and still the number on hand would be nearly doubled. All this can be done at a very small expenditure of money. A cottage and an acre of land must be rented where there is good range. Black bees and Italian queens can be bought according to the means of the new bee-keeper. An extractor must be purchased and also the tools and lumber for making the hives and frames; or he can buy these. The foundation-machine is too costly an implement for a small bee-keeper to purchase, and he would therefore have to purchase his comb foundation already made. This can be done at a cost about double the value of the wax. Then the new hand must be willing to accept, as proven, certain traits of bees which older heads have proved. He must not go over grounds on which the lifetime of many trained observers has been passed. He must study closely the bee literature of the age.
>
> By patient study, aided by the personal superintendence of one or two colonies, the operator will in time be able to go into bee-keeping as a business, and he or she, for there is no business so especially adapted to women as bee-keeping, will possess a certain means of livlihood of which nothing can dispossess him. His income will fluctuate with the seasons, but no more so than the income of every farmer. If he is not above peddling around his honey he can get a much higher price for it than if he sends it to a commission merchant, and, moreover, his customers will then be sure of getting the unadulterated, and will become regular customers of stated quantities.



CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Sept. 5—N. W. Ill. and S. W. Wis., at Rockton, Ill.
Jonathan Stewart, Sec.
19—Michigan Central, at Lansing, Mich.
E. N. Wood, Sec.
26, 27—Kentucky State, at Louisville, Ky.
W. Williamson, Sec., Lexington, Ky.
28—Norfolk, Ont., at Waterford, Ont.
Elias Clouse, Sec.
Oct. 3-6—North American, at Cincinnati, O.
Dr. Ehrick Parmly, Sec., New York City.
5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.
10, 11—Northern Michigan, at Pewamo, Mich.
O. R. Goodno, Sec., Carson City, Mich.
17, 18—Northwestern, at Chicago, Ill.
C. C. Coffinberry, Sec., Chicago, Ill.
Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.
Nov. 1—New Jersey & Eastern, at New Brunswick.
J. Hasbrouck, Sec., Bound Brook, N. J.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

☞The second annual general meeting of the Ontario Bee-Keepers' Association, will be held in the City Hall, Toronto, on the 13th of Sept., at 7 o'clock p. m. If any change is made in the time of the meeting due notice will be given. R. McKnight, *Sec.*

☞ The Kentucky State Bee-Keepers' Convention will meet in Louisville, Ky., at the Exposition Building Press Rooms, on Tuesday and Wednesday, Sept. 26th and 27th. All bee-keepers are invited to attend, and send essays, papers, implements, or anything of interest to the fraternity. The Exposition will be in full blast and cheap. Railroad rates from all points. W. Williamson, *Sec.*

The National Convention.

The North American Bee-Keepers' Society will hold their 13th annual meeting at Washington Park Hall, Cincinnati, O., across Washington Park from the Exposition building. Time, Oct. 3rd to 5th, 1882. First session Tuesday, 10 a. m., Oct. 3. We are encouraged to hope that this will be a very profitable meeting, as we are promised papers from, and the presence of, a large number of our most prominent bee-keepers both in the United States and Canada, and essays and implements of the apiary are expected from abroad to add to the knowledge imparted by the research and inventive skill and methods of our countrymen.

Ehrick Parmly, *Sec.*
New York, July 12, 1882.

☞The Northwestern Bee-Keepers' Convention will meet at Chicago, Ill., on Tuesday and Wednesday, Oct. 17 and 18, 1882. The office of the American Bee Journal has been kindly tendered as a place of meeting. A cordial invitation is extended to all bee-keepers, and especially those of the Northwestern States, to be present. The meeting takes place during the last week of the Inter-State Industrial Exposition, to enable all to obtain reduced railroad rates. First session at 10 a. m. C. C. Miller, *Pres.*
C. C. Coffinberry, *Sec.*

☞The Union Bee-Keepers' Association of Maryland, Virginia and West Virginia, will meet at Hagerstown, in the room of the County Commissioners, at the Court House, on Wednesday, Oct. 18, 1882, at 1 o'clock, p. m., the session to last two days. The Washington County Fair will then be in progress, which will give persons an opportunity to attend the exhibition. All persons intending to go will please drop me a card, so that I may secure for them half-fare rates.

J. Luther Bowers, *Sec.*
Berryville, Va.

☞The fifth annual meeting of the Northern Michigan Bee-Keepers' Convention will be held at Pewamo, Ionia County, Mich., on the second Tuesday and Wednesday (10th and 11th) of October, 1882. Pewamo being on the D. & M. and H. & M. R. R., it will be accessible by rail. The members will do all in their power to make the meeting interesting.

H. M. Roop, *Pres.*
O. R. Goodno, *Sec.*

☞The Central Michigan Bee-Keepers' Association will meet Sept. 19th, at Lansing, in the Capitol Building. We call the meeting two weeks before the Annual Fair of the Central Michigan Agricultural Society meets, for the purpose of making the final arrangements for a large exhibit of bees, honey and apiarian supplies. A cordial invitation is extended to bee-keepers everywhere. The meeting will be of especial interest, and a large attendance is expected.

E. N. Wood, *Sec.*

CORRESPONDENCE

For the American Bee Journal.

The Width of Sections, etc.

C. H. DEANE.

I must say that I agree with Messrs. Heddon and Townsend on the width of sections without separators, for I have experimented with some only 1½ inches wide this season, and with honey flowing very slowly, when it did come, they averaged ¾ of a lb. to the section, and they are not well filled out either. I therefore conclude that 1¾ inches is about the right width. We may get a little more than a lb. in this width, at times, but then it will help to ease our conscience when we sell it for 25c. per lb., as I did my nice white section honey taken by the Deane system this season.

It may be that the Deane system was not the cause of the honey being nice and white, but it is a fact, that the sections came off easily, white, dry and smooth, and without separators. I have never been a comb honey producer to any extent, for I have had a great deal of trouble in getting the bees to go to work in those 2 story arrangements so extensively used, also no little annoyance in prying the sections out of the propolis after they were filled; but the "solid" cash brought in by those few little sections, together with ease of manipulation of the Deane system, has quite won me over.

But to the etc. of this article, I want to say to Mr. Heddon, and others who may wish to try the Deane system, that I have greatly improved it this season, and that there is now no danger of its ever shrinking away from the ends of cases; no danger of the bottom bar sagging. Why? Because—1st. I now clamp the cases together with 3-16 iron rods having a screw and thumb nut on one end, and bent at right-angles at the other. By this method you can make the cases as tight as you can make a keg with hoops. 2d. I now make the clamps of 4 pieces, with a 1½x14 inch observing glass in the center, and they cannot warp. The clamps are made about ⅝ longer than they were formerly, with a notch in each end for the rod to drop into. One little turn of the nut loosens the rods, and in a second's time all is open before you. 3d. The bottom-bars will not sag, because the clamps hold the weight, and not the bottom-bars. 4th. We must have cases to send the honey to market, and instead of the brown paper and strips, as formerly spoken of, we will use the following, as the cost is about the same, and it is much more serviceable.

After taking the honey from the hives, remove the cases and clamp the sections together with the rods, 24 in number; but before clamping them tight, put 4 strips ¼x¼x4¼ inches between two rows of sections, so the grocer can pull them out when they get to market, and thus loosen the sections; now while all is moderately tight, so the sections cannot shake about in transit, screw on the top ⅜x11¼ x18¼ inches, rabbeted ⅜x⅛ inch on the edges, so the ⅛ will come down close to the tops of the sections; now turn the case over and nail in the ends ½x4⅜x10¾ inches; and the case with observing glass on the sides is ready to be given away with the honey, as it is cheap, solid and neat. I believe something has been said about the Deane system surpassing anything of the kind, for section storing, in the Langstroth hive, either in the top story or in the body of the hive. Mr. Bingham, I think, being one of the testifiers. I cannot say why Quinby's and Bingham's style of frame does not supersede the Langstroth, unless it is that the bee-keepers think the Langstroth frame the best, or that, like Mr. Heddon, they take a great deal of "solid comfort" in their own "fixin's."

Mortonsville, Ky.

For the American Bee Journal.

Sale of Comb Honey—No. 2.

G. M. DOOLITTLE.

Having tried to sell our honey at home and failed, or having a larger crop than could be disposed of to advantage in our neighboring towns, our next step is to find a market for it in some of our large cities. As selling outright is preferred by all to selling on commission, let us see what can be done in that direction first, leaving the shipping on commission as a *dernier resort*. In selling to parties in distant cities, the first thing presenting itself is the getting of the address of responsible persons who are dealing in honey, or who might be interested enough to buy our production. As a rule, nearly all wholesale grocers buy and sell more or less honey, and to these we apply. "Yes," says one, "but how shall we get their names and know their standing, whether responsible or not?" Well, I will tell you how an enterprising friend did last year and made a very successful sale of his honey, his crop being about 5,000 lbs. Through my suggestion as to how I got the names of commission merchants in large cities, he went to an acquaintance of his who had access to Bradstreet's Commercial Reporter, this friend securing the same for him to look at for an hour or two. Dunn & Co. publish a similar report to Bradstreet's, and all large business firms have one or the other of these commercial reporters, so as to enable them to transact business with reliable parties. By this means my friend secured the address of several wholesale grocers in Boston, New York, and elsewhere, who were quoted as being worth $100,000 and upwards, with unlimited credit. To these he applied, enclosing a stamp for their reply, telling them what he had and desiring to send them samples of his honey if they thought they could handle it at the price named, which he believed to be the true value thereof. The result was that after sending samples he sold his whole crop to one house in Boston at the prices named, and all parties were well pleased. He now says he feels easy about the disposition of his crop for future years.

Next we come to selling through commission merchants, which has been my practice for several years, as I could not make a satisfactory sale of my honey outright. At first I consigned my whole crop to one house, next to two houses, and finally to three, finding that the more I divided my product the sooner sales were made, and at a more remunerative figure. Last year I thought to divide my product still more, and so sent it in from 300 to 500 lb. lots to ten different commission merchants, whose names and standing I obtained as above. Prompt returns was the result, at a satisfactory price, and in some cases exceeding market quotations two cents per lb., thus proving to me that if we ship on commission, the scattering of our product into several cities, and among several commission houses, will, as a rule, bring the best results.

Now, there is another way of selling on commission often overlooked by the large producer, which is practical for one who produces a small amount, say from 100 up to 1,000 lbs. In most all of our small towns more or less honey is consumed, yet not enough to establish a market for the same, and in all such towns, if the right amount is left (not enough to over-stock the market), remunerative prices may be obtained. In a small town about 4 miles distant from where I write, lives a bee-keeper who produces from 200 to 400 lbs. of honey annually. This honey he takes to the two stores selling general merchandise in said town, and leaves it to be sold on commission, placing the selling price high enough to give him the real value of his honey after deducting the storekeepers' commissions, and in this way his whole crop is usually disposed of at the true value thereof, in accordance with the prices it would bring if shipped to a distant city. Thus I have given five practical ways of disposing of our crop, all of which have come under my observation, if not actually practiced by me.

All that is necessary is to try till you find the one most adapted to your wants. In all cases the putting up of your crop in a tidy, attractive shape, and having a knowledge of the value thereof, will be the method by which we can get the true value of our production according to the markets of the world.

Sometimes it happens that the market quotations at the time we wish to prepare for selling our crop will be only nominal. In such cases I find it a good plan to write to some of those parties handling honey, for their opinion as to prices in the near future, and this, coupled together with what we know regarding the production of honey in the country, will help us to arrive at about what the real value of our product is. One thing I have noticed, however, and that is that generally prices rule higher for honey in October, than any other month in the year; and unless the crop in the country is very short, the holding of it after that date results as a rule in our being obliged to accept of a less price.

Thus I have fulfilled my promise as to giving you a series of articles on the production, care and sale of comb honey, and if they have been of any benefit to any *one* reader of the *good, old*, AMERICAN BEE JOURNAL, I shall not have written in vain.

Borodino, N. Y.

Translated by Alfred Neighbour.

Effects of Cold—Pollen Gathering, etc.

DR. DZIERZON.

The milder the winter is, the more complete will be the repose of the bees, and the lower will they be able to allow the temperature to become even when they have their winter quarters, while increasing cold stimulates them to breathe more frequently and to consume more food; in other words, it stimulates their vital powers to greater activity in order to be able to offer the necessary resistance to the cold. It will be seen from this whether it is advisable to keep bees exposed to the cold in winter. Theory and experience, as well as the last mild winter, demonstrate to us practically the fallacy of this opinion. Exposure of the bees to extreme cold certainly causes them to crowd together into as thick a cluster as possible, but it does not send them into a sleep-like state of repose. On the contrary, it startles them out of their rest, compelling them to hum more loudly, while previously they were in perfectly silent repose. Nor does severe cold prevent premature breeding. There is generally more brood to be found in the hive in January and February, when the weather is very cold or after the temperature has been very low, than during a continuance of mild weather. Dr. Krasicke acknowledges this fact, but explains it in a peculiar manner by saying that because bees consume more food when the temperature is low, the production of chyle would also be greater. But it is a known fact, that in order to create a higher degree of temperature, bees consume a large quantity of honey only. The latter, however, only supplies an increased quantity of excrementitious matter as secondary product, but no chyle. The presence of much excrementitious matter in their bodies, on the contrary, renders the bees more incapable of producing chyle. It is the disturbance of their rest and incitement to activity in order to raise the temperature, which also directly affects the queen, inducing her to deposit eggs sooner than she would have done if the weather had continued mild. The principal cause of early breeding, however, is the presence of much moisture, which forms inside the hive when the temperature outside is lower; water, as is well known, forming by far the largest constituent of the food of the brood, and want of water prevents or restricts breeding.

During mild weather, when the difference in the temperature of the air inside and outside the hive is but insignificant, little or no moisture is precipitated, just as the windows of our rooms condense no moisture then. At such a time the bees may be suffering from want of moisture, but as long as the suffering does not become acute it does no harm. It has rather the advantage that it keeps the bees back from breeding until they are able to fetch in sufficient quantity, the water which is indispensable in the preparation of chyle. It is best that breeding should be delayed till such a time when the bees are able to gather fresh pollen in considerable quantity, as many colonies, especially young ones, possess but a small stock or none at all of this material, which cannot be dispensed with when food is to be prepared for the brood. This is generally the case at the time of flowering of the alder tree, so that bagfuls might be collected from many trees, especially from those in isolated positions, and the bees might supply themselves from this source with pollen for the whole year. If favored by the weather, they could take full advantage of the alder flowers, which mostly make their appearance in March. Unfortunately, however, on account of the uncertainty of the weather at that time of the year, the pollen is frequently a complete failure; and should the weather happen to be favorable, the flowering time of the alder passes too quickly to be fully utilized. The flowering season of the alder might be artificially prolonged if branches with plenty of flower-buds were cut off and kept in a cool and shady place until the flowering time was coming to an end, when they might be put into the ground in a sunny spot near the apiary. But on account of the uncertainty of the bees being able to fully utilize these flowers, even if in the neighborhood of the apiary, we might render them a far greater service if we took the trouble at the time of falling of the alder flowers to collect the pollen which Nature offers in such abundance in order to supply the bees with it. We might perhaps moisten it with honey and squeeze it into the cells.

I have taken this trouble in former years, but found it rather a tedious and troublesome labor, and I have often asked myself the question whether it would not be possible to obtain the valuable substances which pollen contains—viz., the nitrogen, the essential oils, the ferments and salts from the entire buds, if these were collected before the pollen became scattered abroad by the wind, either by a process of drying or roasting, by pulverization, or dissolved as a kind of tea, and to make them palatable to the bees by mixing them with honey. The solution of this question would be a worthy and most commendable task for bee-masters who at the same time are thorough chemists.

It would certainly be better if the various artificial contrivances to keep our bees supplied with the substances their economy requires were not needed. The weather late in last summer and in the autumn was most unpropitious for the impregnation of queens, and in this district at least rendered it altogether impossible. In former years it was a rare exception in my apiary to find queens remaining unfertilized even if reared late in the season. Even about Michaelmas, when one would naturally expect all drones to have disappeared, my queens still became fertile if only a few really fine days intervened to allow them to fly out again and again, and often far away from their hive. In the year 1867 the weather during the whole month of September was inclement and cheerless, and not one young queen became fertile, but on the 8th of October a calm, warm and sunny day followed. After the bees had been playing joyfully I examined several hives with young queens in the afternoon, and found that eight of them exhibited the sign of impregnation; in fact, all my queens for impregnation became fertile, although the number of drones in my apiary scarcely amounted to a hundred.

All the young queens which had not become impregnated at the time of our meeting at Erfurt last year remained unfertile, and had finally to be thrown away as worthless. Warned by this experience, I examined afterward five parent hives, in which I certainly did not expect a change of queen to have taken place, and discovered either no queen at all or a virgin queen, and was obliged to unite these colonies with smaller colonies, as I had no longer any spare queens at my disposal. In this respect the mild weather which prevailed late in the autumn, and even this winter, was also very welcome, as it enabled operations to be performed which in colder weather could not very well have been attended to.

Carlsmarkt, Germany.

For the American Bee Journal.

That Bee Poisoning, Etc.

JAMES HEDDON.

Mr. Moore's article on bee-poisoning is "company" to my misery. I am surprised that I should have forgotten to mention the swelling about the lids of my eyes, though the under lids swell most, but not as much as Mr. Moore's. They itch and burn first. They get their immediate affection from poison thrown into the air, but I have often wondered if I should have any such sensations if I never got stung. I handle bees rapidly, and get nearly all my stings upon the hands, from pinching the bees accidentally.

How strange that Mr. Demaree and myself should each write an article containing arguments and proofs upon the same subject, for the same page of the same issue of the same paper at the same time. And what a contrast between our opinions; also between the results of our operations based upon these opinions. Now, honor bright, I think that if Mr. Demaree would only get out of that big "Blue-Grass region" (all flesh is grass, but all grass does not yield honey), get the horse and cow-breeding theories out of his head, and go to raising honey to sell to support his family, his practice would soon reverse his theories, which tell him that traits of character which fully, yes, even more than duplicate themselves at the first cross, do not all run out at the second and third. There is no reason in such a theory, and if practice with thorough-bred cattle says such is a fact, it says right the reverse with bees. This I know from six years' experience. I have theory, reason and facts on my side of the problem as regards bees, and feel able to maintain them by reasoning as well as by demonstration to all those who visit my apiary.

Thanks to Mr. Hutchinson for his frank acknowledgment of the correctness of my plan of transferring. That sort of a man is generally correct in most things.

Dowagiac, Mich.

Iowa Homestead.

How to Manage Robber Bees.

J. J. KIZER.

Next to starvation robbing is the worst trouble with the bee-keeper. Many a colony of bees has been destroyed by others carrying off every particle of their stores, leaving them either to follow the robbers home, or starve in the hive, in either case causing the loss of a colony of bees to the owner. Even then the trouble does not stop, the robbing colony becomes very strong, either by accession of the robbed bees, or by an increase of brood-rearing, or both. When so strengthened, no ordinary colony can withstand their attack. They also become very cross, sometimes stinging and fighting apparently just for the fun of the thing, which is always a symptom of something wrong, but not invariably a sign of robbing, but an effect.

Signs.—First stage.—Great commotion in front of hive; bees fighting and some trying to effect an entrance to inside of hive. *Second stage.*—Bees rushing out of hive, running to edge of alighting-board, arising from there with difficulty, caused by being heavily loaded. If you do not recognize robbing by these symptoms to a certainty, catch one of those heavy fellows leaving the hive, pull him apart and see if his honey sack is filled; if so, set it down as a case of robbing in its second stage.

Preventions.—As usual with nearly all our troubles, an ounce of prevention is better than pounds of cure. First contract the entrance of each colony according to its strength; very weak colonies just so that what few bees fly from the hive can pass. See that the size of the entrance is regulated on the inside of the hive by a stick that will pass under the whole thickness of the hive, so the point of attack which is on the inside shall be narrowed down to the minimum, but see that they do not become stopped.

Under no circumstances let any bee get a taste of honey outside of its hive, either by leaving honey about the house, or by leaving frames exposed while working with the bees, or by access to hive in which the bees have died, leaving honey. This is important any time in the season.

Remedy.—There are many ways to stop robbing, sometimes one way is best, sometimes another. Some recommend carrying the attacked colony into the cellar, I do not like this plan for reasons too tedious to state. Some prefer to put straw, hay or grass over the entrance, and throw water into the entrances of the robbing hives, also giving the robbers a shower at the attacked colony, this will generally have a good effect. I prefer to tack a wire screen two inches wide and as long as the width of the hive over the length of the entrance, leaving only a very small hole for the bees to pass. This screen will admit air, so the bees will not come out and cluster on the outside of the hive, giving the robbers full sway. If this arrangement does not answer, stop even the small hole in the wire screens until dusk, then let out robbers, stop the small hole again, and leave it so two or three days, when you may consider the colonies reasonably safe. It may be necessary to say that smoke will have to be used in these manipulations.

Des Moines, Iowa.

For the American Bee Journal.

Golden Honey Plant.

DR. G. L. TINKER.

The bees did not get down to business upon the golden honey plant until about the 20th. They are now storing in the sections rapidly, and work fully as well, and are carrying in as much honey as they did when the white clover was at its best. So far this season it has been wet and unfavorable for a large yield of nectar in any plant. The fact that the bees are now getting honey in large amount from it, as they did last season when it was extremely dry, will remove all doubt as to its reliability in this section. I find that the bees get very little pollen from it. For five miles down the river there are scattering plants along the roadside. In passing along I have not failed to see bees upon nearly every plant. There is no other plant here in bloom at this time that the bees get honey from to amount to anything.

I am receiving many inquiries in regard to the golden honey plant, and desire to say to those living in northern sections that it is perfectly hardy here at 30 degrees below zero. Its natural habitation is on moist soils, and it is spread to other locations mostly by high water in the river every spring. Owing to the seeds being broadly winged, they readily float and are carried away. I have often seen it growing upon high ground, and think it would spread everywhere if there was a natural way, except by water, of scattering the seed.

It will grow in low thickets, among large trees in deep shade, and in most any location. It often also grows very thick upon the ground, when it crowds out all other kinds of weeds and grass; yet it is not a very troublesome weed here, nor is it likely to be anywhere. It will grow upon any kind of moist soil, clay, sand or loam, and upon uplands if sown in the fall upon plowed land and brushed or dragged in. As the plant yields a large amount of seed, a small plat will furnish enough the first year to go a long way in further seeding.

The plants from the seed bloom from one to two weeks later than those coming up from old roots.

The compound flowers are yellow, the rays extending about 2 inches, the head being about ¾ inch in diameter. The period of bloom extends from the 1st of August to the middle of September.

No kind of stock feed upon it or injure it in any way, except to make paths through it in pastures. It is a weed of no known value except to the honey bee. The honey made from it is somewhat balsamic, and will, undoubtedly, prove to be a superior pectoral remedy for some affections of the lungs. The flavor is aromatic, rich, very sweet, and is preferred by many to that of the white clover; it is also less apt to derange the stomach. The color is a fine amber, and section boxes soiled with it are stained yellow.

New Philadelphia, O., Aug. 24, 1882.

Prairie Farmer.

Selling Honey to Advantage.

MRS. L. HARRISON.

There is nothing a bee-keeper enjoys more than plenty of "clear cash" at the close of the season. This is what he has been aiming for, working and toiling early and late during the year, and the jingle of it is pleasant.

Some apiarists are good producers, but have poor faculty in disposing of the product; others, again, are natural born peddlers—you may push them out of the house, tell them to take their traps and be gone, while they, not abashed, will return and sell you the identical articles you refused to as much as look at, at a good price. Last year we purchased, a few miles from home, beautiful white clover honey, as white as the whitest, for 10 cents per lb., while at the same time, if that honey had belonged to other parties, they would have charged 25 cents per lb. and obtained it. Recently a lady called and inquired how we sold honey. We told her that we had no white clover honey this year, but yellow fall honey, which we were selling at 20 cents per lb. With a toss of her head, she replied, "Mrs. Bragg bought 20 pounds of a farmer lately for 10 cents per lb."

The farmer who keeps a few bees, obtaining them, most likely, by catching a runaway swarm, gives them no attention except hiving them at swarming time, and putting on surplus boxes, considers that what honey they make is clear gain, as "they work for nothing and board themselves." When he takes off his honey, if he has more than his own family needs he takes it to the nearest town and offers it, either at a grocery, or to a friend, for sale. When the question is asked, "How much do you want for your honey?" he replies, in a careless way, "I don't know anything about the price of honey; give me whatever you think it is worth! Is 10 cents per lb. too much? Suit yourself about the price; I'm not at all particular." So the bargain closes.

Persons who depend entirely upon the product of bees for a living, have reason to dislike this class of bee-keepers. If a farmer has an animal for sale, a fat steer or pig, he will demand the highest price, even to the fraction of a mill, and the same way if it is hay, corn, or oats; but if these lords of the soil have honey, butter, or a chicken for sale, feel that they are in little business, hurry through it as quickly as possible, and get out of sight.

We have known bee-keepers to come to this city with a wagon load of honey, try to sell it at one grocery, telling, by the way, that they were in a great hurry to be back at home. After trying several groceries they came to the conclusion that honey was poor sale. These grocerymen understand their business. They make their living, as the Dutchman says, "by buying *sheap* and selling dear." In a short time, with the help of the telephone, all the dealers are informed that there is a big load of honey in town, and that by holding off, it can be purchased at a low figure. We once inquired of a groceryman how much he paid for his honey. He said, "O, there was a fellow who came to town with a big wagon load, and some more of us bought him all out, at 6 cents per pound all round." If these persons had come to town and stored their honey in a safe place the first thing, and then taken samples of it—white, yellow, dark, and extracted, as the case may have been—and dropped in at different places, where they wished to purchase their own supplies, looking at the goods, inquiring the prices, and remarking, "I must purchase before I go home, but I have something to sell," they would have realized double for their honey. If it was at a harness shop, and he needed a new whip, bridle, or anything in that line, the dealer, who is always anxious to trade, will probably say to his hands, "Boys, how many of you want some of this honey; this man wants to exchange for our goods." The trade is soon completed, and he leaves, perhaps, for a shoe store, and buys, in the same way, all his supplies, sometimes paying out some money, and again have some paid to him. While buying his supplies he will meet with cash customers, and when his honey is disposed of he will return home, laden with comforts for his family, and with more money than he would have had had it been sold for cash only.

Peoria, Ill.

[A liberal distribution of "Honey as Food and Medicine," will also help in establishing a home market.—Ed.]

SELECTIONS FROM OUR LETTER BOX

Wild Camomile Honey.—We have had a splendid season for increase and for honey. I increased from 18 colonies to 50 by natural swarming, but now the bitter honey comes again to ruin the fall crop. In 1878 I attributed it to horehound, but now I know it comes from wild camomile. I can do nothing with it except for feed in case it is needed, and bring my bees out in the spring strong and fine. It is beautiful, thick, golden honey, and I would like to have your idea, and the suggestions of bee-keepers generally, as to what to do with it.

E. P. Massey.

Waco, Tex., Aug. 25, 1882.

[We have never seen a sample of the honey, and hardly know what it is like. It might possibly be used in some branches of manufacture, especially by brewers, but we fear it would be impossible to neutralize its bitterness, so as to make it an article of general commerce.—Ed.]

Gathering a Surplus Every Week.—My bees are "just booming," having had less than a week at a time since fruit blossoms in which they were not gathering a surplus. My last swarm was Aug. 24th, but should have had more each day had not the rain for the past three days kept them back. Sweet clover has been in blossom since June, and gets more plentiful as the season advances, and the same stalks now have ripened seed and blossoms, and lots more to come. Goldenrod is just beginning to blossom. On page 538 of the Bee Journal, the printer makes me say, "93 rather weak colonies," I think I said 9, at any rate, I should have so said.

A. B. Mason.

Wagon Works, O., Aug. 28, 1882.

Bee Matters in Kansas. — Bees are nearly a failure this season too. In May they started off as though they were going to do well, but the cold wave put a stop to their work, and they gathered no surplus until about the 20th of July, and then the weather became dry and hot, and honey came in sparingly. Up to date some of my best colonies have stored 25 to 35 lbs. of comb honey, and others 45 to 50 lbs. of extracted; at the present the flow continues, and will, I think, last until we have rain. I visited Leavenworth city and vicinity on the 10th to the 13th of August, and found most of the bee-keepers disheartened, but their bees had done rather better than ours here, for I helped to take the honey from some of them and found the brood chambers nearly full and very little brood. They are trying to keep up with the times by using the 4¼x4¼ sections and Langstroth hives. Please answer the following questions through the Bee Journal and oblige: 1. In sowing Bokhara clover for bee-pasturage with timothy, will it hurt the honey flow to cut it when the timothy is ready to cut for hay? 2. Will it yield honey the coming season if sown this fall? The questions may have been answered before in the Journal, but if so, I failed to see them. We can readily see that we will have to plant for honey. I have 3 kinds of hives—Langstroth, Quinby and American—but I have made the American hive longer, and it now resembles the Quinby, only it is longer than that, and takes 14 frames 12x14. 3. Can I have one-piece sections made to fit these for next season? I am using smaller ones now, filling up the spaces with blocks of wood.

H. J. Ward.

Farmington, Kan., Aug. 22, 1882.

[1. It will retard the blooming a little, but make it more profuse.

2. But very little.

3. Yes; you can have one-piece sections made any size you wish, but you will have to give in advance the exact dimensions of the sections you wish, when they will be made just to your order.—Ed.]

After Honey-Dew.—The honey season here has been very peculiar. White clover was abundant, but it did not yield half a crop of honey. Bees have been very thick on the maples in the forest for several days—are they after honey-dew? I never saw the like here before. There will not be half a crop of honey here in this section, and not half the usual increase. Our bees are working on buckwheat now with a rush. I have heard it said that sweet clover (*Melilotus alba*) does not yield any honey. I have a small quantity in the yard, and the bees have covered it ever since it blossomed. I have watched sweet clover for the last five years, and, taking the seasons all through, after white clover has gone, nothing excels it; any barren land will grow it, if it is seeded. I notice with much regret the death of my old friend, A. F. Moon, with whom I was personally acquainted for several years previous to his going to Georgia. He was one of our noble souls.

F. H. Finch.

Sharon, O., Aug. 21, 1882.

[The bees are undoubtedly gathering honey-dew, not only from the maples, but perhaps from other forest trees. Several references to the abundance of honey-dew this season will be found in the Bee Journal this week.—Ed.]

Encouraging in Kentucky. — I will be able to make a very good report from my apiary, notwithstanding the poor commencement this spring. Bees are doing extremely well now on buckberry, red clover, teasel and smartweed. The goldenrod has made a rank growth, and will bloom profusely. Altogether the outlook is encouraging.

John T. Connley.

Walnut Lick, Ky., Aug. 23, 1882.

Preparing for the Fair.—This has been a good season for honey with me. The spring was very late and wet during fruit bloom, and bees got but little honey, but white clover and basswood were good, and my bees have given me a good surplus. We have had a lull in the honey harvest for a few days, but the fall flowers are just coming into bloom, and if we do not have too dry weather we anticipate a good fall harvest. I find a ready market for all my honey at home. Honey is bringing 18 to 20 cents for comb in sections, and 10 to 12 cents for extracted. The quality of honey never was better; I intend to make an exhibit of bees and honey at our County Fair, also apiarian implements. Will it answer to close the entrance of the hive with wire-cloth, or will it be better to make a kind of porch of wire cloth, and attach to the front of the hive, and will it need any ventilation at the top? There has not been much interest taken in honey exhibits by the managers of our Fair, but I am in hopes of working up an interest this fall that will induce them to offer liberal premiums in the future.

A. D. STOCKING.
Ligonier, Ind., Aug. 21, 1882.

[Better bore holes in the sides and ends, over which tack wire-cloth from the inside; then cover the tops entirely with wire-cloth, over which you can place the cover, so that should the bees become quite warm or excited, you can immediately cause the heat to escape from the top. The entrance should be closed with blocks which can be easily removed, to give the bees a flight, if desirable.—ED.]

Method of Dividing.—My queens' wings are clipped. When a swarm issues I watch for the approach of the queen, and catch and put her in a cage, I then open the hive and destroy all the queen cells. Usually, the bees will settle for half an hour or more, then return; soon as they return I move the old hive and put an empty one in its place; I then put one-half of the combs and bees in the new hive, filling up each with frames of foundation, and closing the old hive in good shape, put it where it is to remain. Now daub the queen with honey, raise the blanket or honey-boxes, give a few puffs of smoke, drop the queen in, and slant a board in front of the entrance; I then take a laying queen from a nucleus, clip her wing, and introduce her in the new hive on the old stand in the same way as the first. I rear my own queens this season. I have increased 18 strong and 5 nucleus colonies, making in all 35 colonies and 5 nuclei, in splendid condition. Some swarming nearly every day. I took 22 capped queen cells from one Syrian colony the other day. I can handle my Italians all the time without gloves; but I cannot say that of the Syrians. They are very watchful and frisky, and will defend their stores, of which they will have a good share if any are to be found. My experience is that they will gather enough more than the Italians to balance their stinging and biting accounts. The honey season here has been good at times. At this date my bees are gathering honey very fast from white and Alsike clovers, corn tassels, catnip, buckwheat and scores of wild flowers. Heartsease, figwort and Spanishneedles are very promising, and I am still in good hopes. I have only taken about 200 lbs. of comb honey and 100 lbs. of extracted. The golden honey plant and cleome seed I sowed last winter and spring have not grown; the sweet clover I sowed last fall came up this spring, and some of it is over 3 feet high. I thought it might bloom yet this fall. The days are hot and nights cool. What is the name of inclosed twig and bloom, and what its merits as a honey plant? Bees are on it from early morning till night.

R. M. OSBORN.
Kane, Ill., Aug. 19, 1882.

[The twig and blossoms are a vervain, which ranks as a very good honey plant.—ED.]

Wiring Frames.—No more piercing for wiring frames; have some hooks like this f, ¼ inch long under the angle, drive them in top and bottom bars, fasten the bottom-bar in a vise, drive tack in center of bottom-bar, wrap wire around and go to upper right hand hook, then back to next upper hook and down to next and so on, finishing at the point of starting. Let no man stand up and say, "I have been using this for a year," for if he has and not told the public about it he ought to—to—well, he ought to keep still now, at least. No patent.

C. H. DEANE.
Mortonsville, Ky., Aug. 21, 1882.

Shipping Cages.—Mr. E. A. Thomas wishes to know who has had "better success with shipping cages than he has?" Had Mr. Thomas stated the number of queens he has mailed, as well as the number he has lost, it would then be an easy matter to decide who has had better success. I have mailed over 500 queens, and only one reported dead, and 2 others injured. Have sent queens into every State (California the farthest, also to Canada). The report comes back, bright, lively and in fine condition. I heretofore made my cages too small, and the loss has been heavy. I now make them twice as large as I did last year. I found it very discouraging business last year, but now all is changed, and no queens are reported dead or not received. I put 4 parts honey and one part water to fill the sponges with. Thus the bees are supplied with water as well as honey. I do not think water necessary to keep the bees alive, but use it, as all honey soon dries on the outside the sponge and the honey will not come to the surface, as it will when water is mixed with it. My cages are only a block of wood sawed out of plank 1⅞ inches thick; they are sawed ¾ inch thick; after the holes are made I nail a cover ½ an inch thick on one side, after the sponge is put in; I then nail a piece of wire-cloth over the other side, and when only one queen is to be shipped, the wire-cloth side is covered with a piece of wood exactly like the one nailed on the bottom side, excepting it has a ⅜ inch hole made in it for ventilation. Any one having bad luck in shipping queens had better try my cage. Will mail one free to any one applying for them.

HENRY ALLEY.
Wenham, Mass.

Speed of Bee's Flight.—Please name the accompanying flowers. They grow on a bush from 2 to 7 or 8 feet high; are very plenty in this vicinity in moist and swampy lands. In 1880 bees stored more honey from this than from everything else combined. Bee hunters call it white blowens and also pepper bush. I saw in a piece written by Mr. Heddon for the BEE JOURNAL, "We are told bees fly from 1 to 4 miles in a minute." I would ask, who tells it, and how do they prove it? I never knew any to fly at any such rate, and I have timed thousands.

C. E. CHACE.
East Freetown, Mass.

[The sprig of blossoms sent are what in the Western and Central States are called yellow-weed or yellow-bush. The time of a bee's flight, we think, is pretty much a matter of guesswork; some have accredited them, too, with visiting honey pastures as far as seven miles away from the hives.—ED.]

Honey-Dew in Iowa.—That honey wave I spoke of July 17, still hangs over us in Iowa. I never saw anything to excel it, every weed seeming to secrete honey. Smartweed takes the lead, then honey-dew beats anything I ever heard of. For the last 20 days I have seen the leaves on the oak, hickory, elm, cottonwood, ash, walnut, sumac, and in fact, most every kind of timber in this section, dripping with honey-dew. A bush three inches thick, with a common sized top, has the appearance of having had a gallon of honey spread over the leaves. I have spent a part of 3 days trying to find from whence it comes. From the best of my experience, I must think that it is produced by insects. On close examination, I find a small, light-green insect under all the leaves that I have examined—the smallest hardly visible, while the largest is larger than a large gnat, with silver-colored wings. I will not attempt to give the amount, but will only say that I have taken a barrel full of honey-dew honey, and wish it would be the last, especially if we have other honey flowers. This honey is very dark and strong. I sold some before I knew what it was, for buckwheat honey, and am afraid it will injure my honey sales. I am introducing extracted honey in our market, and find some trouble, not much. Some say that people have recipes for making honey. I had more trouble with linden honey. 1. What occasions honey-dew? 2. What color is the honey? 3. Is it wholesome for winter? Bees are swarming every day, from 1 to 4 swarms. I have 53 colonies and 1,035 lbs. of honey from 19 colonies in the spring, and sometimes almost wish for the honey flow to stop till I can catch up.

WM. MALONE.

Oakley, Iowa, Aug. 26, 1882.

[1. In your case, you have pretty well answered "what occasions honey-dew." On page 556 we answered the question for Mr. Wm. Sturgill.

2. Sometimes quite dark; at other times amber-colored.

3. We would not wish to risk it for wintering on.—ED.]

Manum's Hive.—I wish to correct what is probably a mistake of the compositor in giving the dimensions of A. E. Manum's frame, which reads "22 inches long and 9½ deep." It should read 12x9½ inches inside. It is on page 539, Aug. 23d. According to my limited experience, Mr. Manum's hive is of very simple construction, and very easy to handle bees in. All you have to do, is to turn back the cap and remove the cloth from the brood chamber, and raise the frames with as much convenience as though it was a simplicity Langstroth. I am much pleased with your answers to my questions in regard to swarming, etc. Twenty years ago there were hundreds of swarms of bees kept where there is now hardly one, in this section. In many instances those who kept bees then have never seen a frame hive, and know comparatively nothing of the modern improvements. They are afraid to expend a dollar or two for a book or paper to learn from.

A. P. FLETCHER.

Ludlow, Vt., Aug. 27, 1882.

An Error.—I notice in the BEE JOURNAL of Aug. 23d, page 539, you have made an error in giving the size of my frame, in answering Mr. A. P. Fletcher. You say my frame is 22 inches long; to be correct it should have read 12 inches long by 9½ deep, inside measure. This has been the poorest honey season I have ever experienced.

A. E. MANUM.

Bristol, Vt., Aug. 26, 1882.

[It was a typographical error, such as are easily committed, but sometimes lead to prejudicial impressions. —ED.]

A Suggestion.—Bees have not done well in our part of the country. I think it would be a very interesting feature in the National Convention to have some of the different makes of mills at work manufacturing foundation at some time during the meeting. It would greatly help those desiring to buy to decide which kind they would like best. It is my intention to be there, and I hope to see some machines working.

JOHN CRAWFORD.

Pleasant, Ind., Aug. 28, 1882.

Honey-Dew.—I send you specimens of honey-dew on the leaves of the paw-paw, that I picked in the woods this morning. It is very abundant, and is mostly under the maples—is general through the woods. Bees are gathering it industriously, and building out foundation in a most satisfactory manner. It is not confined to any particular leaves.

H. R. BOARDMAN.

East Townsend, O., Aug. 30, 1882.

[The honey-dew was nearly absorbed from the leaves into the paper inclosing them; on a very few there was a glistening spot which showed its presence, but even these had evaporated and entirely disappeared after 12 hours' exposure to the atmosphere, from which we conclude there is very little saccharine matter about the honey dew.—ED.]

Botanical.—I send plants for name. No. 1 grows 6 feet; No. 2 grows 5 to 6 feet; No. 3, 2 to 4 feet; No. 4, 3 to 4 feet; No. 5, 5 feet; No. 6, 5 to 6 feet. All these plants grow on dry soil except No. 3, which grows on rather moist soil.

J. W. PIGG.

Riverside, Iowa.

[No. 1 is figwort or Simpson honey plant; No. 2 is a stranger to us; No. 3, blue vervain; No. 4, motherwort; No. 5, yellow-weed; No. 6 is a vervain.—ED.]

On the Wing.—I took a drive through the woods this morning, and honey dew was abundant on the leaves of hickory and oak trees. As I sit and write I look across the divide, and see the leaves shining with nectar, so plentiful that a clear drop forms at the terminal of the leaves. Many fields are yellow with the bloom of Spanishneedles, and white clover is rank and blooming. Bees are swarming, and from present appearances, this locality will be favored with a large honey flow this autumn. On the wing.

MRS. L. HARRISON.

Downing, Mo., Aug. 25, 1882.

Large Increase.—The bees are now booming. We have had, the last two weeks past, the best honey weather we ever had. This has been a very good season for increase, and bees are now storing honey very fast. I have increased from 56 to 230 colonies, and will not look for so large a crop of honey as if I had increased less. My bees have, however, enough honey to winter on, and should the weather hold favorable a reasonable time, I will expect a fair average crop.

H. S. HACKMAN.

Peru, Ill., Aug. 28, 1882.

Too Much Swarming.—My bees are doing well. They swarmed too much the 1st of August, but have got down to business now, and I expect a good crop of honey.

JOHN ERWIN.

Louisville, Ill., Aug. 25, 1882.

Bees and Crops.—Surely Providence has smiled upon our Lone Star State this year. Wheat, oats, corn, cotton, and all kinds of fruit in abundance. Sugar cane is doing finely. I have lived here for 25 years, and have never seen a more bountiful crop of everything. A fine yield of honey has been gathered in all parts of the State, except a few of our Southern counties. The linden crop was a failure. My bees gathered enough to keep them breeding up well, and now they are gathering rapidly from what we call milkweed and boneset. Next month goldenrod will commence blooming, and from appearances now we will have a good fall crop. I have had several swarms this month, and am now rearing queens and superseding old ones. We can rear them here until November. I sell most of my honey in Houston and Galveston. In 2 pound glass jars, I get $3.60 per dozen wholesale, and 6 pound buckets, $9 per dozen; 1 pound sections, $15 per 100, and find ready sale for it. Pure extracted honey is fast taking the place of adulterated syrups. I get a great many letters from bee-men in the older States, and take pleasure in answering them all, and will continue to give all the information I can regarding the resources of our State.

J. W. ECKMAN.

Richmond, Tex., Aug. 24, 1882.

Still Swarming.—I have been in hopes, from day to day, that the bees would quit swarming, but they do not. We have had from 1 to 4 swarms every day for the last 3 or 4 weeks, and young swarms will fill a full hive, with little foundation starters, in from 8 to 10 days; and in from 25 to 30 days I have taken out 25 lbs. of surplus honey. Since spring, from 24 colonies, I have increased my stock to 85; all natural swarms. I often put 2 swarms in one hive, on account of being short of hives.

I. W. KOCH, M. D.

Quincy, Ill., Aug. 30, 1882.

One Steady Flow of Honey.—Here in Southwestern Iowa, in the fore part of the season up to linden bloom, about the first of July, we had to feed to keep the bees from starving, and from that time till the present we have had one continual flow of honey, and our bees our now swarming at the rate of from 3 to 6 per day, which is unprecedented here. We put them back as fast as they come out, as there is more profit in the honey than in bees at this time of the year. If it should continue as it is now up till frost, we will be able to send in a large report at the end of the season. We now have 500 two-pound sections about ready, in addition to 200 already taken off from our 27 colonies. I inclose a branch from a small bush that grows here in the woods and fence corners, on which the bees work from daylight till dark. What is it?

S. C. SMITH.

Wheeler's Grove, Ia., Aug. 27, 1882.

[It is Indian currant or coral berry. —ED.]

Notion Store.—Will you please inform me through the Bee Journal of a house in Chicago that wholesales articles suitable for a counter-store—that is, sort of trinkets and notions; or perhaps there is a wholesale store that has a 5c., 10c., 15c., etc., counter; one with a good reputation.
Frank Juergens.
Hutchinson, Minn.

[Yes; Messrs. Butler Bros., 169 Adams street, can perhaps supply you with a catalogue of their goods, prices, etc. We believe their reputation stands very fair.—Ed.]

Seeding Basswood.—This spring our bees commenced gathering pollen March 2d, from the elm, after which came fruit bloom, but bees paid very little attention to this on account of the buckeye (*Æsculus flava*), one of our forest trees, which was in bloom then. The honey from it is clear and very thin when first gathered. The pollen is dark red. It was in bloom about 3 weeks, but on account of cold and wet weather, bees were unable to work on it more than 4 or 5 days, during which they filled their hives and we obtained some surplus by using the extractor. Our surplus was taken from the white clover, which commenced blooming about the middle of June, and is still in bloom to some extent, but bees do not pay much attention to it, as they are at work on buckwheat bloom. Basswood was almost a failure this season. At what time should basswood seed be planted, and what is the best method to procure young plants from the seed?
Frank R. Roe.
Jordan, Ind., Aug 28, 1882.

[Plant the seeds in drills as soon as ripe, covering very lightly with sand loam and leaves. Transplant when about one year old.—Ed.]

All Right for a Fall Crop. — This has been the poorest season for honey in this section for 10 years. Clover was almost a failure; last year's drouth and the March-like winter killed nearly all of it, and even red clover failed to bloom. Swarms that came off about the 1st of June, and put in empty hives, have to the present only about half filled them. My best colonies that did not swarm, have only gathered about 30 lbs. in sections filled with last year's comb, and I feared very much that my bees would not get enough for winter. We are having a splendid rain now, which will make it all right for a fall crop.
R. B. Oldt.
New Berlin, Pa., Aug. 27, 1882.

Plenty of "Strong" Honey.—Our bees at the present time are doing finely on fall bloom and buckwheat. Our white honey was all gathered from basswood in about 6 days, but if the weather remains as now for 15 days, we will have, as the Dutchman says, plenty of "strong" honey.
O. R. Goodno.
Carson City, Mich., Aug. 28, 1882.

Bees are Boiling Over.—Bees are now "doing a land office business." They done poorly in spring, but when basswood came in bloom they began breeding faster than I ever knew them to do before. The hives are now boiling over with bees, and swarming is the order of the day, but the old queens do not seem to be so ready to go along. They are also getting honey very fast. Mine are mostly hybrids, and have become so vicious that I have come to the conclusion to either Italianize or quit. I have now 25 colonies.
Peter Billing.
Pawnee City, Neb., Aug. 28, 1882.

Anticipates a Cold Winter.—My bees have not done well this season—too much rain and cold weather; but they have increased by natural swarming from 8 to 14 colonies, and a little box honey. I look forward to a more than ordinary season next year. I base my calculations upon a good honey season following a cold winter, and if all signs prove true we will get a severe winter the coming one. I have never received any particular benefit from keeping bees yet, except the pleasure the little fellows afford me, but I am going to try it another year and see what I can do.
S. G. Reed.
Kent, O., Aug. 23, 1882.

Prospects for a Good Crop.—Bees done better here during this month than at any time this season. We had a number of swarms in August, which is something unusual. It is getting rather dry now, but have prospects for a good crop of goldenrod, asters, etc., a little later, while at present buckwheat and second crop red clover are yielding fairly. Will have some surplus and enough for winter stores. We had very few early swarms, consequently very little increase.
W. H. Stout.
Pine Grove, Pa., Aug. 22, 1882.

Mammoth White Clover.—I send you a few heads of that wonderful clover. This is the second time it has blossomed this season. It does not grow like any other clover. Bees work on it remarkably. It is of a beautiful pyramidal form, and every head seems perfect, and a beautiful white in nearly every case. I will give a more extended description of it in future.
F. H. Finch.
Sharon, O., Aug. 28, 1882.

Quite Satisfied.—Hearing of so many failures in New York State we feel quite satisfied with what little our 125 colonies have done this season. We have taken 1,500 lbs. of extracted, and think we will have over 2,000 lbs. of comb honey.
Greiner Brothers.
Naples, N. Y., Aug. 28, 1882.

Kept on the Jump.—Bees are just booming. I never saw them work as they have this summer. It has been one continual flow of honey since June 20th. My bees have kept me on the jump since that time.
D. S. Burbank.
Grundy Center, Iowa, Aug. 25, 1882.

Fertile Workers. — Inclosed find piece of comb taken from a young colony hived about 2 weeks. I find no queen. All fresh comb is as full of eggs as this. Why is this? Did you ever see so many eggs? One laying worker could not deposit so many. Please report on this in the Bee Journal.
P. P. Collier.
Rush Hill, Mo.

[The comb is very full of eggs, with, in some instances, quite a dozen in a single cell. We have observed the past season, in a small colony of Syrians, nearly a score of workers depositing eggs at one time, and have expressed the opinion that the conditions necessary to develop one fertile worker, would, if aggravated, develop hundreds.—Ed.]

Done Well this Summer.—My bees have done well this summer so far. I started in the spring with 7 colonies, increased to 18, and obtained 420 lbs. of extracted honey. The bees are still gathering honey very rapidly from buckwheat and ironweeds.
David K. Knoll.
Salamonia, Ind., Aug. 18, 1882.

The Best Honey Harvest.—The honey harvest, since July 10th, has been the best I ever saw.
E. Doty.
Macksburg, Iowa, Aug. 26, 1882.

Gathering Sweet Clover Seed. — Please state in the Bee Journal how to gather and save sweet clover seed? I have a quantity of it, but do not know how I can save it profitably.
Ben. Clendenon.
Grinnell, Iowa.

[Mow, thresh and screen it as you would other grain.—Ed.]

Make a Home Market. — Since the first of June there has never been a more favorable season for bees, but up till June the bees had a hard struggle to get through. When white clover commenced to open they made up for lost time. Basswood was good. Almost all who take care of their bees obtained 100 lbs. per colony, from the basswood bloom. For the last 2 weeks bees have been working almost as hard as any time this year. I will extract from 1,800 to 2,000 lbs. from 65 colonies this week, all gathered in the last 10 or 12 days. The honey is of first-class quality—thick and nice. I wish every bee-keeper in Iowa would try and dispose of their crop in the State, and encourage the consumption of extracted honey. Put it up in attractive packages, and my word for it, there will be no drag in its sale. Ask what it cost you to produce it, and in proportion with other sweets that are as good as honey. Let every bee-keeper bear in mind James Heddon's article on page 374 of the Bee Journal, entitled "The Coming Market." There is no reason why we should not have good prices for our products, as well as the farmer and mechanic.
H. O. McElhany.
Brandon, Iowa, Aug. 31, 1882.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance :

For **4** weeks		**10**	per cent.	discount.
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Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ *Always* forward us money either by postal order, registered letter, or by draft on Chicago or New York. Drafts on other cities, or local checks, are not taken by the banks in this city except at a discount of 25 cents, to pay expense of collecting them.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club :

For a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

◆

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid ; per dozen, 50 cents ; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Emerson Binders.—We have had a lot of Emerson binders made especially for the BEE JOURNAL for 1882. They are lettered in gold on the back, and make a nice and convenient way to preserve the JOURNAL as fast as received. They will be sent post paid by mail for 75 cents.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs ; this is also added to the above. Price, 10 cents.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00 ; or with King's Text-Book, in cloth, for $2.75 ; or with Bees and Honey, in cloth, $2.50.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., September 4, 1882.

The following are the latest quotations for honey and beeswax received up to this hour :

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for honey is quiet. Extracted brings 7@10c. on arrival. No comb honey on the market worth mentioning, prices nominal.

BEESWAX—Scarce, and brings 20@25c. on arrival.

C. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb honey is steady at 18@20c. Some extra nice 1 lb. packages have sold at 22c. No demand for dark combs. Extracted honey in kegs, barrels and casks, 9@10c. Demand better than for months past.

BEESWAX—25c. for prime yellow ; dark 18@22c.

R. A. BURNETT, 165 South Water St.

CLEVELAND.

HONEY—There is no change in honey in our market the past week ; 1-lb. white honey sells at 22c., 2-lb. at 20c.; second grade, 20c. for 1-lb. and 18c. for 2-lb. Extracted has not moved yet; nominally held at 12@14c.

BEESWAX—Scarce at 25@28c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—We note sales of dark extracted at 7c. and medium quality at 8c. Inquiry has been fairly active. Offerings are small.

We quote white comb, 18@20c.; dark to good, 12@15c. Extracted, choice to extra white, 9@9½c.; dark and candied, 7@7½c. BEESWAX—28@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—We quote at 7@7½c. for strained in bbls. and half bbls., 8@9c. for extracted in cans and kegs ; comb, 18@20c. per lb. Larger values of strained and extracted apply to the lesser pkgs.

BEESWAX—27@28c. per lb.

R. C. GREER & CO., 117 N. Main Street.

NEW YORK.

HONEY—No quotations reported.—ED.

BEESWAX—The supply is moderate and prices held about steady, though very little doing. Western, pure, 27@27½c ; Southern, pure, 28@28½c.

D. W. QUINBY, 105 Park Place

BOSTON.

HONEY—Trade quiet. We quote at 20@22c., according to quality.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

Only a Crape on the Door.—We have just received a copy of a new motto song and chorus, called "Only a Crape on the Door," composed by Edward J. Abraham. This is one of the most touching and affective songs that ever came to our notice. It is very easy, and can be played on piano or organ. It is published at 40 cents, by F. W. Helmick, 180 Elm street, Cincinnati, Ohio.

◆

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

Advertisements.

New Kegs

FOR HONEY.

In order to satisfy the demand for small packages for Extracted Honey, I have heretofore procured kegs intended for syrup, fish, lard, etc., and in view of this growing trade, I now feel justified in having made to order a **Special Keg**

Designed Expressly for Honey.

These I am obliged to buy in large quantities in order to supply them at popular prices, and procure a package not used for any other purpose. They are made of Norway Pine, and have from 7 to 9 chine hoops on each end.

I have tested a sample keg by filling it DRY with white clover honey, and without the heads being painted.

It neither leaks nor flavors the Honey.

It is not necessary to paint the heads, but when painted I will guarantee them not to leak, and if well scalded, the pine **will not flavor the honey.**

Capacity, 175 pounds........Price, 80c. each.

The first car load of these kegs will arrive about Sept. 10th, and all orders will receive my prompt attention.

The 5 and 10 gallon kegs will be sold, as heretofore, at 40c. and 55c. each, respectively.

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

Bright Italian Queens.

200 NUCLEI.

Having filled all my orders, I can now send Queens by return mail. My customers say I send the nicest they get.

J. T. WILSON,
36wtf Mortonsville, Woodford Co., Ky.

200 COLONIES

FOR SALE.

Tested Queens only in full colonies. Write for prices, and be sure to state if you have or have not ever received my circulars.

I am overwhelmed with letters containing orders for Tested Queens, and inclosing $2, $3 and often $5 each, saying, "Send me one of your best Tested Queens, no matter about color or cost; I want one Tested for *business*; saw your advertisement in the American Bee Journal." Now, you do not know how happy I feel to thus substantially realize the splendid confidence my fellow bee-keepers put in me, and my new departure in breeding the best bees, regardless of color or number of bands, the more so, that among those ordering are old and experienced apiarists, whose judgment we have learned to look up to. I feel that here is the proper place to say to them that I cannot possibly supply any more queens of any sort, Tested or Dollar, unless the bees are bought with them by the pound, or the whole colony is taken. I cannot spare any more Tested Queens alone and keep up the standing of my apiary for the rearing of a large number of queens next season. I now have more orders for Dollar Queens than I can fill, I fear. Next year I will try to satisfy all, and will notify you in the advertising columns accordingly.

I consider it now getting pretty late to rear the best Queens to fill the place of those sold out, and think that purchasers had better omit queen-rearing at so late a date. I have found that the best time for the bee-master to rear the best stock is about the time the bees do the best business.

JAMES HEDDON.
Dowagiac, Mich., Sept. 1, 1882.

QUEEN APIARY.

Italian and Cyprian Queens—*large and beautiful*—sent by mail, with purity, safe arrival, and *satisfaction* guaranteed. Only $5.00 per half dozen. Address REV. J. E. KEARNS, Morning Sun, Iowa.
36w1tp

FOR SALE—An Apiary of 120 colonies, suitable for Extracted Honey. For further information apply to J. McINTYRE, Strathroy, Ont.
35w2tp

PLYMOUTH ROCKS. — Exhibition Birds and Mated Trios a Specialty. Correspondence cheerfully answered. WM. H. BUSSEY, 131 Lake street, Chicago, Ill. 35sm9t

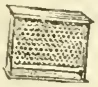
THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

AT LULING, TEXAS.

I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.
14w39t **J. S. TADLOCK.**

FLAT-BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **25c.** per pound, delivered here, Cash on arrival. Shipments solicted.

To avoid mistakes, the name of the shipper should always be on each package.

ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL

EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book.

☞ For sale at the BEE JOURNAL Office. ☜

Established 1857.
BAKER & CO.
Satisfaction Guaranteed.
DESIGNERS AND
ENGRAVERS ON WOOD
CORNER OF
CLARK & MONROE STS.
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CHICAGO.
DEALERS IN
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65 *ENGRAVINGS*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

$777 A YEAR and expenses to agents, outfit free, address **P O Vickery Augusta, Maine.** 36w1y

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.
1w1y **D. S. GIVEN & C.,** Hoopeston, Ill.

FREE! FREE!

Send for our 28-page Illustrated Catalogue of Bees, Queens and Bee-Keepers' Supplies before purchasing elsewhere. Choice bees, good goods, and satisfaction guaranteed.
11w6m E. A. THOMAS & CO., Coleraine, Mass.

DUNHAM COMB FOUNDATION—40c. per pound; extra thin and bright, 10 sq. ft. to the lb. 48c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13w1y

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:
—"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified. One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1w1y.

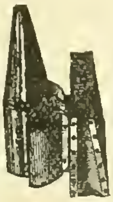
LOOK HERE!

If you want cheap bees and hives to suit, good Cyprian, Albino or Italian Queens, Comb Foundation, all kinds, Section Boxes, and everything a live apiarist needs, send for prices.

Full Colonies and Nuclei a Specialty

with good young Queens. Give me a call, friends, and I will try and please you. (Box 819)

E. T. FLANAGAN, Rose Hill Apiary,
5w1y Belleville, St. Clair County, Ill.



BINGHAM SMOKERS.

I can sell the above Smokers at MANUFACTURERS' PRICES, by mail or express, at wholesale or retail. All the latest improvements, including the CONQUEROR.

Send for my 32-page Illustrated Catalogue of Bee-Keepers' Supplies of every description.

ALFRED H. NEWMAN,
923 W. Madison, CHICAGO, ILL.

PLEASE NOTICE the price of Tested Queens in the advertisement of W. Z. Hutchinson. He has a large stock of fine Queens on hand, and can fill orders promptly.
33smtf

Fruit Evaporators,

To be used on a common cooking stove, capacity 3 to 5 bushels per day. Price, complete, $10; in the flat, partly put together, for $6. A few agents wanted. For particulars and prices for Evaporators, Queen Bees, etc., address

JOHN H. MARTIN,
9sm1y Hartford, Wash. Co., N. Y.

MY 16-PAGE PRICE LIST of Italian, Cyprian and Holy Land Bees, Queens, Nucleus Colonies and Apiarian Supplies, will be sent to all who will send me their name and address on a postal card. **H. H. BROWN,**
14smtf Light Street, Col. Co., Pa.

1882-Southern Headquarters,-1882

For Early Italian and Cyprian Queens;

Imported and Home-bred; Nuclei and Full Colonies. For quality and purity, my stock of bees cannot be excelled. I make a specialty of manufacturing the Dunham Foundation. Try it. If you wish to purchase Bees or Supplies, send for my new Catalogue, giving directions for introducing queens, and remarks on the New Races of Bees. Address,

DR. J. P. H. BROWN,
5smtf Augusta, Ga.

HENRY ALLEY, WENHAM, MASS.

Queens Worth $2.00 for $1.25.

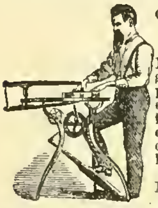
Large, handsome and beautiful. Every one warranted as good in all respects as tested queens. No loss of queens by mail in my new cages—all go safely. Safe arrival and purity guaranteed. Italian, Cyprian and Holy Land Queens by return mail. No money required until queen is received.
33wtf

HONEY

For the past few years I have made this excellent food my leading article. Having the best established reputation in this city as a dealer in PURE HONEY direct from the Apiaries, enables me to obtain the highest market prices. Your consignments and correspondence respectfully solicited.

R. A. BURNETT, Commission Merchant,
Successor to Conner, Burnett & Co.,
28w13t 161 So. Water Street, Chicago, Ill.

BARNES' PATENT
Foot Power Machinery



CIRCULAR AND SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

HEADQUARTERS IN THE SOUTH

For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.

5mtf **PAUL L. VIALLON**, Bayou Goula, La.

Italian Bees, Queens and Sections.

Untested Queens, in May, $1.50 each; in June, $1.25; July and after, $1; per dozen, after July 1, $10. Sent by mail, with directions for introducing. Italian bees by the half pound, same price as untested queens. One 2 comb nucleus, without queen (Gallup frames), in May $3, June $2.50, July and after $2; 2-comb nuclei, with the standard Langstroth frames, 25 per cent. more. Sections—Planed dovetailed sections, 4¼x4¼x1¾. $4.50 per 1,000; 5½x5½x1¾, $5 per 1,000. Sections of this thickness do not need tins between them to insure straight combs, and the bees can ripen up and seal honey faster than in combs with deeper cells. See testimonials in March number of *Gleanings*. Please remit by P. O. money order, by registered letter, or by draft on New York or Chicago. Address.

O. H. TOWNSEND,
19mtf Kalamazoo, Kalamazoo Co., Mich.

C. Olm's Comb Foundation Machine.

☞ Send for Sample and Circular.

18mtf **C. OLM**, Fond du Lac, Wis.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture**, with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes**, all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to A. I. ROOT, Medina, O.

1882. JOSEPH D. ENAS, 1882.

(Sunny Side Apiary,)

Pure Italian Queens,

BEES, COLONIES, NUCLEI,

Extractors, Comb Foundation, etc.

Address, **Sunny Side Apiary,**
9m8t Napa P. O., Cal.

THE AMERICAN POULTRY JOURNAL.

Is a 32-page, beautifully Illustrated Monthly Magazin devoted to

POULTRY, PIGEONS AND PET STOCE

It has the largest corps of practical breeders as editor of any journal of its class in Americ , and is

THE FINEST POULTRY JOURNAL IN THE WORLD.

Volume 12 begins January 1881. SUBSCRIPTION:—$1.00 per year. Specimen Copy, 10 cents.

C. J. WARD, Editor and Proprietor.
182 CLARK ST., - CHICAGO

THE BRITISH BEE JOURNAL
AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited and published by

C. N. ABBOTT, Bee-Master,
School of Apiculture, Fairlawn, Southall, London.

☞ We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 per annum.

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. *Sells at Sight*, Double your money Address Dr. Chase's Printing House, Ann Arbor, Mich

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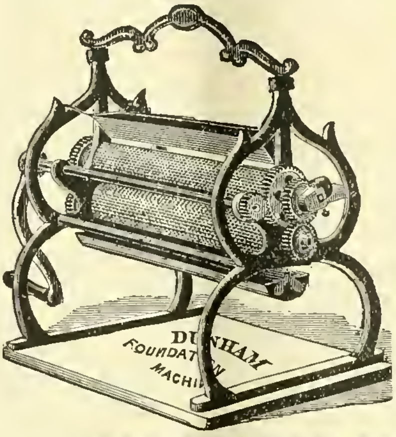
FRANCES DUNHAM,

Inventor and Sole Manufacturer of

THE DUNHAM



FOUNDATION MACHINE.

Patented Aug. 23d, 1881.

☞ Send for New Circular for January, 1882.

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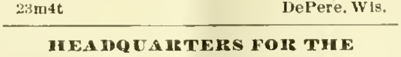

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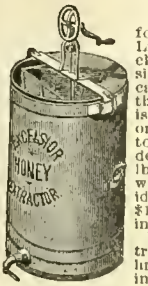

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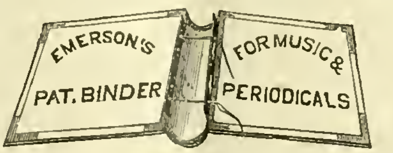

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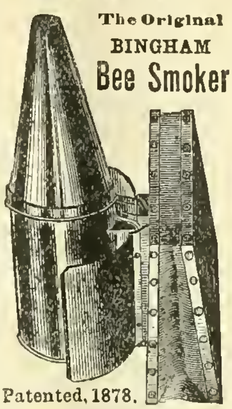

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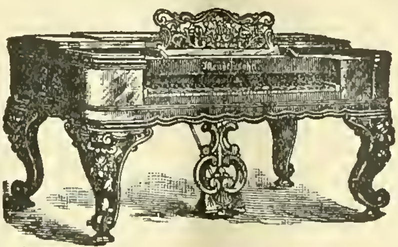

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.............................577, 579
British Bee-Keepers' Association.......... 577
Professional Apiculture...................... 577
Evils Correcting Themselves.............. 578
The Market Seeking the Producer......... 578
Preserving Late Swarms...................... 579
Indiana State Fair............................ 579

Among Our Exchanges—

Old Fogy Bee-Keeping in California....... 579
Care of Comb Honey.......................... 580
Honey Ants Employ Slaves 580
Superiority of Italian Bees................... 580
Congress and Adulteration 580
Healthfulness of Honey....................... 580

Convention Notes—

Local Convention Directory.................. 581
Ohio Bee-Keepers' Association............. 581
The National Convention..................... 581
Convention Notices............................ 581
To Southern Bee-Keepers 581

Correspondence—

High Elevation for Bee Hives.............. 582
The Bee Pastures of California............ 582
Scorpions in Bee Hives...................... 583
The Development of the Honey Bee...... 584
Colorado as a Locality for Bees............ 585
The Best Comb Foundation 585
The Common Sense Hive.................... 585

Selections from Our Letter Box—

Drone Brood.................................... 586
New Courage Added.......................... 586
Harvest About Ended......................... 586
Ready for the Fair............................ 586
Late Swarm.................................... 586
Honey from Celandine...................... 586
Preparing to Feed............................ 587
Why is it?....................................... 587
Quite Cheering 587
Bees on a Spree 587
Solidago... 587
A Few Good Days Needed................. 587
No Let Up 587
Crooked Combs............................... 587
The Swarming Fever........................ 587
A Second Queen............................... 588
Never Knew a Better Year 588
Extraordinary Work 588
Not so Bad..................................... 588
Outlook is Good.............................. 588
Goldenrod in Bloom......................... 588
Nothing Like It................................ 588
Excessive Swarming......................... 588

British Bee-Keepers' Association.

At the 8th annual exhibition of this society, held at the Royal Horticultural Society's Gardens, at South Kensington, Aug. 3–8, the attendance was large and enthusiastic. Entries for premiums were made in 42 classes, there was a spirited and creditable competition among exhibitors, and the number of premiums awarded averaged between 3 and 4 for each class, embracing almost everything useful and ornamental about an apiary. We have only space to enumerate the names of the successful contestants for premiums in some of the leading classes: Best colony of Ligurian (Italian) bees, Messrs. Neighbour & Son; best colony of English bees, T. B. Blow; best colony of any other variety, T. B. Blow, for Carniolans; best observatory hive, stocked with bees and queen, Messrs. Neighbour; best movable-comb hive, complete, for summer and winter, F. Search; best frame hive for general use, Messrs. Dines; best and cheapest frame hive, for cottagers' use, Messrs. Dines; best straw hive, T. Sells; neatest and best rack, Messrs. Abbott Brothers; best rack for use on a straw skep, T. B. Blow. Nine classes were devoted to surplus, the first premiums in which were taken respectively by J. H. Brown, H. S. Heath, W. Woodley, J. H. Brown, A. Rusbridge, Miss Gayton, J. W. Measures, K. Allen, and Miss Gayton, Messrs. Abbott Bros. took all the prizes offered for foundation, in three classes. For the best mead, metheglin, etc., T. W. Cowan took 1st and 2d prizes. Best collection of bee furniture, etc., Messrs. Neighbour & Son. In the driving contest, the first prize was awarded to J. K. Filber; second, J. Walton; third, W. Martin.

Professional Apiculture.

The Prairie Farmer, in a late issue, indorses the whole ground recently taken by the BEE JOURNAL in favor of the establishment of an Apicultural Department in the Illinois Industrial University. The Farmer closes its able article by remarking that "if apiculture is taken up at the Champaign University, the professor, whoever may be selected, should know something practically about the business, and not work upon mere theory, as is too often the case with those who think themselves scientists, but who in reality are mere followers of scientific theories." In our opinion, Prof. Burrill is just the man to organize and conduct this Department successfully. At all events, we know of not another in whose ability we have the confidence that Prof. Burrill's name inspires.

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☞ We sincerely regret to learn of the indisposition of Mr. Heddon. In a note from him, he says his advertising in the BEE JOURNAL has deluged him with a flood of letters and business correspondence which he finds impossible to answer personally, and that his supply of queens has been exhausted, except where accompanied by the full colony or bees by the pound. His advertisement in this number pretty clearly explains his embarrassment.

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☞ Persons desiring excursion rates to attend the Bee-Keepers' National Convention can, upon application to Mr. C. F. Muth, Cincinnati, O., obtain a circular giving the names of the different roads and reductions in fare during the great Exposition.

Evils Correcting Themselves.

A recent exchange says "the glucose factories are slowly but surely succumbing to the inevitable, and closing up. The Des Moines factory ran two or three years, and has gone to wreck, after using up $90,000 of cash capital."

"History is but repeating itself." As "murder will out," so will great wrongs correct themselves, and vile and dishonest corporations become so arrogant and burdensome as to hasten their own destruction, and the public good. When glucose, as a commercial product, was first brought to the public notice, much was expected from it as a cheaper substitute for cane and other sugars, in many uses where it could be made to answer without prejudicing public health and corrupting the morals of society; and perhaps at that time it was honestly made and wholesome, but competition was soon stimulated, unscrupulous men became engaged in its manufacture, greed usurped the place of conscience, deception and fraud were resorted to in its use, plausible stories and pious cant were employed to popularize it with the public, poisonous acids and deadly chemicals helped to cheapen its manufacture, and it was forced upon the consumers by "fair means and foul," till its use became a matter of necessity, as nothing could be purchased that was free from its taint. New and dangerous diseases were traced directly to its use. Complications arose which baffled the skill of physicians — they could surmise the cause, but could not prescribe the remedy. Strong men and women became afflicted with chronic complaints, but no cure was inaugurated; children were poisoned with it, but there was no law to punish the murderers; and everywhere the papers teemed with cases of cheese poisoning, etc., but nothing could be done to punish the manufacturers of the poisonous, vile stuff, and the merchant continued to vend the spurious goods under an honest name, because a genuine article could not be obtained.

And in all these dishonest practices the consumer is not the only person who has suffered, although perhaps the principal sufferer, because he has suffered pecuniarily as well as physically—his health has suffered with his pocket. The honest producer has often been driven from his occupation, and forced to quit business, or himself become dishonest. Sugar refiners who would have been above deception, have themselves gone largely into the adulteration business rather than suffer financial ruin; dealers in syrups and honey have sold tons of poisonous compounds as silver drips, golden syrup, rock candy drips, maple honey, strained honey, maple syrup, etc. Dairymen have used the poisonous meal to feed their cows, and supply dealers have sold the glucose to feed to bees. In each case its use has incurred a penalty, and generally the penalty has been paid by somebody.

Thank heaven, the people are becoming educated to a realization of the wrongs which have been perpetrated upon them. Farmers are making their own syrups, and using less sugars; families are buying honey from those they know to be honest; parents are denying their children the poisoned confectionery which has so often entailed a doctor's visit and bill; and the consumption of glucose under various respectable names is so greatly on the decrease as to threaten the majority of the manufacturers with bankruptcy.

We are assured by a person in this city who uses honey largely in manufacturing, that he purchased several barrels of what was guaranteed to be *chemically pure* (whatever that means) honey. One of his employees, by some oversight, one evening left a portion of a barrel of it uncovered, and during the night an unfortunate mouse in quest of plunder accidently became submerged in the stuff. In the morning the workmen found the poor mouse floating around in the liquid, still alive but quite exhausted; they lifted it out, but found the hair completely eaten away from its legs, body and neck. On the head and ears the hair still remained, presenting a very laughable, as well as instructive sight. If poisonous glucose will cause cheese to "rot down in thirty days," and skin a mouse alive in twelve hours, what will it not do with the human stomach if its use is persisted in?

We can sympathize with those who meet with financial reverses, if engaged in honest, commendable business enterprises, but greatly fear we feel an inward chuckle of delight whenever we read of disaster overtaking these traffickers in the "unclean things."

☞ When changing a postoffice address, mention the *old* as well as the new address.

The Market Seeking the Producer.

Less than one year ago, the BEE JOURNAL advised its readers that in the near future the market would as eagerly seek their product as then did the general market seek the producers of butter, cheese, etc., and that with a choice article to dispose of, cash could easily be realized, at paying figures. The prediction has been verified even sooner than we had dared to hope. Several weeks ago California was eagerly visited by agents of several extensive European houses, anxious to buy up almost fabulous amounts, and at handsomely paying prices; but they met with disappointment, as the season has not been so good in that State as was earlier anticipated. Honey in San Francisco now brings as high a price as in the principal markets of the Atlantic States, and offerings are very small at any price.

On Tuesday, Sept. 4th, we were pleased with a call from Mr. F. L. Ripley, a member of the old and reputable house of Crocker & Blake, 57 Chatham street, Boston, Mass., who is making an extended tour of the West, buying up full crops of honey from first hands—producers. He reports the honey crop in New York is not altogether a failure, and gave the names of several extensive beekeepers who had realized very satisfactory yields of choice white honey, and for which they were expecting high prices.

With but occasional exceptions, the crop is quite large throughout the country, the grade generally extra good, and the movement lively, but the season for rapid sales is yet quite early. October is usually the best month for effecting sales and realizing prices, as till that time more or less of doubt prevails in the minds of both seller and buyer regarding the extent of the crop and what should constitute a fair valuation. Producers should feel no anxious doubts, and above all, make no sacrificial sales; but fairly determine upon a remunerative price for their honey, and insist upon receiving that amount. From all the principal cities our commercial correspondents report choice A 1 honey fairly active, and prices good, though not exorbitant.

☞We regret to state that Mr. Frank Benton has lost his little girl, Thekla. She was born in Cyprus, and died in Beyrout on July 5, 1882.

Preserving Late Swarms.

Jas. N. Tucker, East Killingly, Ct., writes Sept. 4th :

Aug. 26 I had a medium swarm issue from a previous swarm of the present season. This last swarm I know contains the laying queen and as she is a young queen reared the present season, very prolific, a purely mated Italian, and her progeny are good workers and gentle, I would like very much to save the colony ; but as they came out unexpectedly, I was not well prepared with foundation, etc., and, as at this rather late period in the season I disliked to weaken any of my other colonies to strengthen this one, I hived them in a Langstroth hive containing 9 frames, one only of which was a frame of brood, the remaining 8 containing only one inch starters of worker foundation. Thus far, as considerable late buckwheat has been in bloom, and as my bees have worked considerably on red clover and upon fall flowers, I have only fed about ¾ lb. of granulated sugar syrup each night; but from date I intend to feed 1½ lbs. each night. 1. With this treatment, what ought to be their condition October 1st? 2. What further feeding will they be likely to need after that date to insure wintering? 3. Will they need to be fed any substitute for pollen, and if so, what and how? 4. Ought I to have done differently in any particular from what I have done? 5. Would you suggest any change in the programme? Perhaps by advising me, through the columns of the Bee Journal, you will also advise many others somewhat similarly situated, and will provide us for like emergencies in future years.

1. Had you given the frame of brood and 5 frames with starters, then, as fast as the combs were built down given a frame each third or fourth day, we think their condition would perhaps be better Oct. 1st.

2. They will need feeding till there will be at least a store of 30 pounds for winter. It is probable the queen will keep up breeding till very late, and there will be much larvæ in the combs at above date, all of which, together with young bees emerging from the cells, will require more food than old bees.

3. No ; bees will find plenty of pollen, or a substitute more acceptable than any you can give them.

4. You might have given the swarm, when well established in the new hive, at least 5 combs well built out, and supplied the frames with starters to the colonies from which you took the combs.

5. Only the above. Aug. 26 is quite late, very late, to hive a swarm and expect to build it up strong enough for wintering. Everything must be the most favorable, with not one adverse circumstance, to insure success, and every help which experience or judgment may suggest, should be employed.

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Indiana State Fair.

We have received a complimentary ticket to the Indiana State Fair, to be held at Indianapolis, Sept. 25 to 30. We shall not be able to attend, but hope the Fair, with its bee and honey show will be a grand success. The managers remark as follows :

The managers of the coming State Fair, commencing Sept. 25, express great encouragement from the bright prospects for success by the early opening up of the business connected therewith ; the anxiety of old exhibitors to secure more space and the several applications to erect special buildings on the grounds for exhibition purposes at private cost.

The indications are such that in order to meet the requirements, 150 new horse stalls are being made. The stables and pens for other stock remodeled and put in complete order that exhibitors and visitors may realize comfort and pleasure. The gradual growth and increased interest manifested in the State Fairs, and the kindly expressions from exhibitors who represent large manufacturing establishments at the principal Fairs, the bountiful harvest now gathered, and a season of abundance in prospective, gives every reason to hope for an improvement on any former year, and the assurance that the Indiana State Fair can be made to rank first on the list of Fairs, as the State is now first in the production of wheat, and second to no other State in all the requisites of human prosperity.

Arrangements are pending for special attractions during the Fair in addition to the large premiums on speed.

All the State Institutions at the Capital City will be prepared to receive visitors during the Fair week, and this will be a rare opportunity, at reduced railroad rates, to visit the new State House, in process of construction.

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☞ Mr. C. F. Muth, writes to the Bee Journal from Cincinnati, Sept. 6. "Please tell all bee-keepers that I will receive any and all goods destined for the National Convention, to be held Oct. 3–5, in our city, free of all charges. No expense for drayage to or from the depots—no charges for storage. All I ask is that the goods be prepaid to our city. The prospects for a good meeting are flattering to the best of my judgment." We anticipate there will be a good display of bees, honey and implements at the National Convention.

AMONG OUR EXCHANGES

MISCELLANEOUS.

Old Fogy Bee-Keeping in California.—The Semi-Tropic California gives the following account of some of it :

In Los Angeles county there is a stretch of foot-hills four or five miles in length with a large variety of "bee feed" where there are five or six separate apiaries, varying in elevation from 1,200 to 2,500 feet, and there is ample range for all. These apiaries have been established from five to ten years, and so far as I can learn there has not been one-half dozen queens bought and introduced in all these apiaries in all these years, and little or no effort made to rear queens to replace old, worn out queens or to supply queenless colonies. In fact the bees seem mostly left to "run" themselves. To save trouble and combs from moths, the top boxes are left in all winter and if the swarm is weak they have a slim chance to rear brood with all that space to warm during the cool days and nights of early spring, and the brood may be chilled, die and be mistaken for foul brood.

In the apiaries referred to there has been but little swarming since 1878, and of course most of the queens are three to four years old which accounts in part for the five to twenty per cent. loss last spring, and the loss from this cause will probably be greater next spring than last as a queen is not supposed to live more than three to four years, and to be generally quite unprofitable after the third year. In some of these colonies the bees have or will supersede their queens, while the very large majority probably will not. Even supposing they were all superseded the queens would not be nearly as prolific as though reared from young prolific queens of no relations to the apiary, besides had there been early introductions of one or more good Italian queens the yearly yield of honey ought to have been much greater, to say nothing of the increased present value of the apiaries. The majority of these bee-keepers don't believe in "fussing" with bees. After breeding commences in spring they "go through" the bees, look at the brood chambers, double up the weak ones and they are done with the "bottom boxes" for that season, and if the queen, as is often the case, makes a brood-chamber of the top box they take what honey they can get from said upper story because it will not do to disturb the bottom box. They will tell you that Eastern bee papers are of no use here and will generally say that bee-keeping will not pay in California. If such men would subscribe to two or three good bee papers, they would be surprised to see how much a little good bee literature will assist to make the business profitable. These men, it seems, generally affect to ignore written or printed experience or suggestions; they have "no use" for book bee-keeping and then wonder why the bee business don't pay. J. H. B.

Care of Comb Honey.—J. L. Bowers writes to the *Maryland Farmer* the following on the care of comb honey:

Do not on any account store honey in a cellar, the dampness causes it to sweat and then the cappings will break and you have a lot of ruined honey. Our honey room is in the second story of our house and will hold two tons. It is 6x10 feet and 9 feet high, with two doors, one on each side; one opening from the hall, the other opening into a room over a porch. This room has one window. Here we put our honey first to let it harden, keeping this room light, after exposing to the light about two weeks, we place it in the honey room. Never on any account place more than two boxes on top of one another, but place shelves above each other on the order of a library. If little red ants bother honey, place the honey on a bench and put each leg or foot in a pan of water, and my word for it, if you keep water in the pans, no ants will bother the honey. Our honey room is as dark as anything can be made to be.

Honey Ants Employ Slaves.—The *Scientific American* contains the following concerning some curious habits of honey ants:

Sir John Lubbock's extraordinary book on "Ants, Bees and Wasps," will amaze readers. Fancy ants having slaves! Fancy these proverbial examples to the sluggard keeping certain insects as we keep cows, and building sheds over them, and keeping others as pets! The aristocracy of ants seem to have all the vices which brought antique monarchies to destruction. Sir John writes soberly, as a philosopher should, and weighs his words no doubt, which makes his conclusions the more astonishing. The author quotes some of Huber's experiments, the value of which he has himself tested. The bloated ant aristocrats, it is said, "have lost the greater part of their instincts; their art, that is, the power of building; their domestic habits, for they show no care for their young, all this being done by the slaves; their industry, for they take no part in providing the daily supplies; if the colony changes the situation of its nest, the masters are all carried by the slaves on their backs to the new one; nay, they have even lost the habit of feeding. Huber placed thirty of them with some larvæ and pupæ and a supply of honey in a box. At first,' he says, 'they appeared to pay some little attention to the larvæ; they carried them here and there, but presently replaced them. More than one-half of the Amazons died of hunger in less than two days. They had not even traced out a dwelling; and the few ants still in existence were languid and without strength. I commiserated their condition, and gave them one of their black companions. This individual, unassisted, established order, formed a chamber in the earth, gathered together the larvæ, extricated several young ants that were ready to quit the condition of pupæ, and preserved the life of the remaining Amazons.' This observation has been fully confirmed by other naturalists. However small the prison, however large the quantity of food, these stupid creatures will starve in the midst of plenty rather than feed themselves. .... I have, however, kept isolated specimens for three months by giving them a slave for an hour or two a day to clean and feed them; under these circumstances they remained in perfect health, while, but for the slaves, they would have perished in two or three days."

Superiority of Italian Bees. — Mr. J. B. Mitchell, in the Hawkinsville (Ga.) *Dispatch*, gives the following brief but comprehensive summary of the superior qualities of the Italian bees:

Their good qualities are now conceded by all who have tried both varieties under similar circumstances, and they are rapidly taking the place of the blacks in all parts of the country.

They are more active than other bees, making three flights in the time that the black bees make two; they are more hardy, working earlier and later, and in cooler weather; they gather honey from flowers that are not frequented by black bees; their queens are more prolific, so that they may be increased much faster with safety; they gather more honey and give more swarms in the same length of time, and are more gentle and easily handled than the black bees.

Their chief point of excellence, and one that is worth everything to bee-keepers in the south is, that they readily and successfully defend their hive against the depredations of the bee moth. A strong colony of Italians is worth more as a protection against this pest than all the moth-proof hives and moth traps that were ever invented.

Congress and Adulteration.—The Grange Bulletin remarks thus on the subject of adulteration of food and the necessity of Congressional legislation on the matter:

We see a step taken in the right direction, and as it should be, when the courts maintain the dignity of the people in carrying out the prevailing sentiment in putting down the adulteration of food. Good-bye to glucose, oleomargarine and other dirty frauds now being practiced on the people in almost every conceivable form, much of which is of a dangerous character as well as poisonous, and should be stamped out of existence. We think the day not far distant when it will be done. When such a grand State as Missouri takes hold of the matter in her courts, as they have done, and pronounces it wrong, let all the States follow suit. Our National Congress should be up and doing something to protect her citizens from such outrages as have been practiced on them. We ask, what is Indiana doing to put down such dangerous articles as artificial honey so often made from chemicals, and butter of grease, and that, too, of the dirtiest kinds, and sold for a genuine article; and many other articles we could mention? Let the people be in earnest about this matter.

Healthfulness of Honey.—An Exchange makes the following remarks on this subject:

Americans are lovers of sweets and consume an average of 40 pounds or more of sugar for every man woman and child of our population. To meet this demand, millions of dollars' worth of sugar are imported annually, and millions of dollars' worth of honey are allowed to go to waste for the want of bees to collect and put in proper shape for the use of man. It is not as generally known as it should be that honey may be employed for sweetening purposes instead of sugar, for most of the purposes for which the latter is used. But could we supply it to the extent of diminishing our imports of sugar to one-half their present proportions, and millions of dollars would be saved for the purposes of business in our own country. But far above all money considerations would be the use of a pure sweet upon the health of the people instead of the vile compounds now sold as sugar and syrups. The healthfulness of honey as food has been admitted from the earliest writers down through the centuries to the present time. Hence we have nothing to fear from the free use of honey, while recent developments show we have much to fear as to health in the use of adulterated sugars and syrups. But the price of honey in the past has had much to do in the keeping it from the tables of men of limited means, who did not possess the workers to collect and store it for them. Honey is a vegetable production, appearing in greater or less quantities in every flower that nods to the breeze or kisses the bright sunlight in all this heaven-favored land of ours. It is secreted in the flower for the purpose of attracting insects, thus securing the complete fertilization, of the female blossoms. Hence it follows that all the honey we can secure in the hour of its presence in the nectaries of the flowers, is clear gain from the domain of nature.

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Sept. 19—Michigan Central, at Lansing, Mich.
E. N. Wood, Sec.
26—Eastern Mich., at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.
26, 27—Kentucky State, at Louisville, Ky.
W. Williamson, Sec., Lexington, Ky.
28—Norfolk, Ont., at Waterford, Ont.
Elias Clouse, Sec.
Oct. 3-6—North American, at Cincinnati, O.
Dr. Ehrick Parmly, Sec., New York City.
5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.
10, 11—Northern Michigan, at Pewamo, Mich.
O. R. Goodno, Sec., Carson City, Mich.
17, 18—Northwestern, at Chicago, Ill.
C. C. Coffinberry, Sec., Chicago, Ill.
Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.
Nov. 1—New Jersey & Eastern, at New Brunswick.
J. Hasbrouck, Sec., Bound Brook, N. J.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Ohio Bee-Keepers' Association.

The Ohio Bee-Keepers' Association met at Grange Hall, on the State Fair grounds, Sept. 1, 1882.

Dr. Besse, of Delaware, was called to the Chair.

The question under discussion was: "Can bees be successfully wintered without pollen?"

Mr. Benedict said yes, but pollen was not the sole cause of dysentery; but one cause was impure honey, and being gorged and confined to hive.

Mr. S. D. Riegel, of Ross county, thought it would be a mistake to take all the pollen from the colony; there were other conditions necessary; thinks in some winters bees would winter without pollen.

A vote was taken on the question: "Is an excess of pollen one cause of dysentery?" Decided in the negative.

Question: "How shall we manage our bees so as to be sure of wintering, and to get the best results next season?"

Mr. Brigham, of New London, gave his experience of two years ago. Had in his care six colonies; lost six; did not lose any of his own; thinks 20 pounds of honey necessary for each colony; he put burlap on top of the frames, and then straw; sometimes straw immediately on top of the frames, without burlap; he has an inch augur-hole in each end of his hive, with wire-cloth over the holes, in each end of the upper story, for ventilation.

Mr. Newton thought the thermometer should stand at 45° for cellar wintering; he can winter with less honey if proper temperature and conditions outside, than with inside wintering; he believes there are other causes of dysentery than continued cold weather.

Dr. Besse thought the hard winter of 1881, and the mortality has left us with the survival of the fittest, *i. e.*, the hardiest of bees.

Mr. Reigel said some of the proper conditions for successful wintering are a good queen, plenty of good, pure honey (not too much), sufficient quantity of mature bees, thorough ventilation and dryness.

Mr. Powell, of Pataskala, wants plenty of mature bees in the fall. He winters on summer stands; only lost $\frac{1}{3}$ of bees during the severe winter of 1880-81. He would not stimulate too early in the spring.

Mr. Benedict would rather have 30 than 20 pounds of honey to winter on. He did not think small colonies profitable to winter. They are more likely to get dysentery than the larger ones. Has had all the experience in in-door wintering that he wants. His bee-house was too warm. He gave a neighbor his experience in in-door wintering, who tried it, lost his bees, and then blamed him.

The general opinion of members present on temperature for successful wintering was, that it should be between 32° and 45°.

A discussion on organization followed, and an election of officers. President, Dr. H. Besse, Delaware, O.; Vice Pres't., Aaron Benedict, Bennington, O.; Secretary, Daniel Spear, Covington, O.; Treasurer, S. D. Riegel, Adelphi, O.

The next meeting will be held some time next December, in Columbus, at some date to be fixed by Secretary and Treasurer. D. Spear, *Sec.*

The National Convention.

The North American Bee-Keepers' Society will hold their 13th annual meeting at Washington Park Hall, Cincinnati, O., across Washington Park from the Exposition building. Time, Oct. 3rd to 5th, 1882. First session Tuesday, 10 a. m., Oct. 3. We are encouraged to hope that this will be a very profitable meeting, as we are promised papers from, and the presence of, a large number of our most prominent bee-keepers both in the United States and Canada, and essays and implements of the apiary are expected from abroad to add to the knowledge imparted by the research and inventive skill and methods of our countrymen.

Ehrick Parmly, *Sec.*
New York, July 12, 1882.

☞ The Northwestern Bee-Keepers' Convention will meet at Chicago, Ill., on Tuesday and Wednesday, Oct. 17 and 18, 1882. The office of the American Bee Journal has been kindly tendered as a place of meeting. A cordial invitation is extended to all bee-keepers, and especially those of the Northwestern States, to be present. The meeting takes place during the last week of the Inter-State Industrial Exposition, to enable all to obtain reduced railroad rates. First session at 10 a. m. C. C. Miller, *Pres.*
C. C. Coffinberry, *Sec.*

☞ The Eastern Michigan Bee-Keepers' Association will hold its fall meeting Sept. 26, commencing at 10 a. m., in room 10 Merrill's Building, Detroit, Mich. A. B. Weed, *Sec.*

☞ The Union Bee-Keepers' Association of Maryland, Virginia and West Virginia, will meet at Hagerstown, in the room of the County Commissioners, at the Court House, on Wednesday, Oct. 18, 1882, at 1 o'clock, p. m., the session to last two days. The Washington County Fair will then be in progress, which will give persons an opportunity to attend the exhibition. All persons intending to go will please drop me a card, so that I may secure for them half-fare rates.

J. Luther Bowers, *Sec.*
Berryville, Va.

☞ The fifth annual meeting of the Northern Michigan Bee-Keepers' Convention will be held at Pewamo, Ionia County, Mich., on the second Tuesday and Wednesday (10th and 11th) of October, 1882. Pewamo being on the D. & M. and H. & M. R. R., it will be accessible by rail. The members will do all in their power to make the meeting interesting.

H. M. Roop, *Pres.*
O. R. Goodno, *Sec.*

☞ The Central Michigan Bee-Keepers' Association will meet Sept. 19th, at Lansing, in the Capitol Building. We call the meeting two weeks before the Annual Fair of the Central Michigan Agricultural Society meets, for the purpose of making the final arrangements for a large exhibit of bees, honey and apiarian supplies. A cordial invitation is extended to bee-keepers everywhere. The meeting will be of especial interest, and a large attendance is expected.

E. N. Wood, *Sec.*

☞ The Kentucky State Bee-Keepers' Convention will meet in Louisville, Ky., at the Exposition Building Press Rooms, on Tuesday and Wednesday, Sept. 26th and 27th. All bee-keepers are invited to attend, and send essays, papers, implements, or anything of interest to the fraternity. The Exposition will be in full blast and cheap. Railroad rates from all points. W. Williamson, *Sec.*

☞ The bee-keepers of Boone Co., Ind., are cordially invited to meet at the office of Barton Higgins, in Lebanon, Oct. 9, at 9 o'clock, a.m., to complete the organization of the auxiliary County Bee-Keepers' Society. The bee-keepers of Hendricks county, Ind., are invited to be present. By request of the Committee.

To Southern Bee-Keepers.—I would like to have announced in the Weekly Bee Journal, for the benefit of those bee-keepers who desire to attend the Convention at Cincinnati from this portion of the South, that round trip tickets from Atlanta, good for 10 days, will be $19. Round trip tickets from Augusta, good for 15 days, $27.55. At these reduced rates, it is hoped that many will shake off their cares for a few days and go to meet their distant brethren in Convention. J. P. H. Brown.
Augusta, Ga., Aug. 30, 1882.

CORRESPONDENCE

For the American Bee Journal.

High Elevation for Bee Hives.

EDWARD MOORE.

Some advise to place the hive 2 to 4 inches from the surface of the ground, in order that the bees coming home with their heavy load may not rise to the hive, as they would if it was set higher. It is not at all likely that bees in general will fly so low, no matter how they are loaded. When I watch my bees coming in, or going out (as I often do), I think they fly more like 8 or 9 feet from the ground than anything less, rising to it and falling from it, only a few yards from the hive. Compare this with the top of stores, as stated in Cook's Manual. My hives are at least 16 inches above the surface, and I think I have seen others about the same height; besides, when they are so low they are in the most impure air, composed, as it is, of carbonic acid gas. What height is considered sufficient to keep them clear of that impure air? or, as the atmosphere in so low a position is poisonous, how are creeping insects and other small animals able to thrive in it? as they are generally unable to be in any other atmosphere. Are they differently constituted? Is that which is poisonous to us, good for them? Decomposition is constantly going on, and, of course, as that goes on in the same proportion is the poisonous gas created. It is reasonable to suppose that where the gas is confined, it is most injurious, and I suppose is accounted for to some extent in that way.

Will some of our scientific men please give the less favored some light on this subject, especially with respect to bees, and I shall be glad if it is extended as much as may be considered advisable, to other objects.

Another thought. How often we hear of bees who have gone off to the bush, and I don't remember hearing of any that were not at least several feet up, and may I say this has been their choice. It may have been, in some cases, that they could not find a home nearer terra firma. I speak of bees that are likely to be of service to man. Of course, there are bees that have their nests in the ground, but they are of no value.

I have a paper before me that tells us that in Britain alone there are more than 250 different species of bees, besides a variety of domesticated kinds, also the adding of fresh introductions. Whether these 250 species build in the earth, or in walls, or attach their nests to ceilings I do not know. Their habits may be, and most likely are, very much varied, as we know there are some wasps' nests in the ground, some build a kind of nest attached to a spar, and some who are called by the name of mason wasp, because they excavate a hole in the wall. I need not try to enlarge on this, as it is likely most intelligent people at least know all I have written on the subject, and more. I see in the number of the BEE JOURNAL dated August 30, which I have received to-day (Sept. 2), something about toads preying upon bees. I have had them at my hives in that praying (preying) attitude, and with all the devotional appearance. After driving them away a few times, the little patience I had has been exhausted, and I have sent them to Davy Jones', although I never could approve of their setting themselves so near my hives, so long as they kept about the garden I would not hurt them. I consider that for reasons of this kind it is better to raise hives at least sufficiently to prevent toads, or any such visitors coming in too close proximity, as I don't think they can climb up the upright leg of the bee-stand.

Barrie, Ont., Sept. 2, 1882.

From the Century.

The Bee-Pastures of California.

JOHN MUIR.

The bee pastures of the coast-ranges last longer and are far more varied than those of the great plain, on account of difference of soil and climate, moisture and shade, etc. Some of the mountains are upward of four thousand feet in height, and small streams and springs, oozy bogs, etc., occur in great abundance and variety in the wooded regions, while open parks flooded with sunshine, and hill-girt valleys lying at different elevations, each with its own peculiar climate and exposure, possess the required conditions for the development of species and families of plants widely varied.

Next the plain there is, first, a series of smooth hills, planted with a rich and showy vegetation that differs but little from the plain itself—as if the edge of the plain had been lifted and bent into flowing folds with all its flowers in place, only toned down a little as to their luxuriance, and a few new species introduced such as the hill lupines, mints and gilias. The colors show finely when thus held to view on the slopes—patches of red, purple, blue, yellow and white blending around the edges, the whole appearing at a little distance like a map colored in sections.

Above this lies the park and chaparral region, with evergreen oaks planted wide apart, and blooming shrubs from three to ten feet high—manzanita and ceanothus of several species, mixed with rhamnus, cercis, pickeringia, cheary, amelanchier, and adenostoma, in shaggy, inter-locking thickets, with many species of hosackia, clover, monardella, castilleia, etc., in the openings.

The main ranges sends out long spurs somewhat parallel to their axes, inclosing level valleys, many of them quite extensive, and containing a great profusion of sun-loving bee-flowers in their wild state; but these are in great part, already lost to the bees by cultivation.

Nearer the coast are the giant forests of the redwoods, extending from near the Oregon line to Santa Cruz. Beneath the cool, deep shade of these majestic trees the ground is occupied by ferns, chiefly woodwardia and aspidiums, with only a few flowering plants—oxalis, trientalis, erythronium, fritillaria, smilax and other shade-lovers. But all along the redwood belt there are sunny openings on hill-slopes looking to the south, where the giant trees stand back and give the ground to the small sun-flowers and the bees. Around the lofty redwood walls of these little bee-acres there is usually a fringe of chesnut, oak, laurel and madrona, the last of which is a surpassingly beautiful tree, and a great favorite with the bees. The trunks of the largest specimens are seven or eight feet thick and about fifty feet high, the bark crimson and chocolate, the leaves plain, large and glossy, like those of *Magnolia grandiflora*, while the flowers are white and urnshaped, in well proportioned panicles from five to ten inches long. When in full bloom, a single tree seems to be visited at times by a whole hive of bees at once, and the grand hum of such a multitude of wings makes the listener guess that more than the ordinary work of honey-winning is going on.

How perfectly enchanting and care obliterating are these withdrawn gardens of the woods—long vistas opening to the sea—sunshine sifting and pouring upon the flowery ground in a tremulous, shifting mosaic, as the light-ways in the leafy wall open and close with the swaying breeze—shining leaves and flowers, birds and bees, mingling together in springtime harmony, and nectarous fragrance exhaling from a thousand thousand fountains! In these balmy, dissolving days, when the deep heart-beats of nature are felt thrilling rocks and trees and everything alike, common business and friends, children and wives, are happily forgotten and even the natural honey-work of bees, and the care of birds for their young, seem slightly out of place.

To the northward, in Humboldt and the adjacent counties, whole hill-sides are covered with rhododendron, making a glorious melody of bee-bloom in the spring. And the western azelea, hardly less flowery, grows in massy thickets three to eight feet high around the edge of groves and woods as far south as San Luis Obispo, usually accompanied by manzanita, while the valleys, with their varying moisture and shade, yield a rich variety of the smaller honey-flowers, such as mentha, lycopus, micromeria, audibertia, trichnostema, and other mints, with vaccinium, wild strawberry, geranium, callas and golden-rod; and in the cool glens along the stream-banks, where the shade of trees is not too deep spiræa, dogwood, photinia, and calycanthus, and many species of rubus, form interlacing tangles, some portion of which continues in bloom for months.

Though the coast region was the

first to be invaded and settled by white men, it has suffered less from a bee point of view than either of the other main divisions—chiefly, no doubt, because of the unevenness of the surface, and because it is owned by individuals, instead of lying exposed to the flocks of the "sheepman." These remarks apply more particularly to the north half of the coast. Further south there is less moisture, less forest shade, and the honey flora is less varied.

The sierra region is the largest of the three main divisions of the bee-lands of the state, and the most regularly varied in its subdivisions, owing to their gradual rise from the level of the Central Plain to the alpine summits. The foot-hill region is about as dry and sunful from the end of May until the setting in of the winter rains, as the plains. There are no shady forests, no damp glens, at all like those lying at the same elevations in the coast mountains. The social compositæ of the plain, with a few added species, form the bulk of the herbaceous portion of the vegetation up to a height of fifteen hundred feet or more, shaded lightly here and there with oaks and sabine pines, and interrupted by patches of ceanothus and buckeye. Above this, and just below the forest region, there is a dark, heath-like belt of chaparral, composed almost exclusively of *Adenos. toma fasciculata*, a bush belonging to the rose family, from five to eight feet high, with small, round leaves in fascicles, and bearing a multitude of small white flowers in panicles on the ends of the upper branches. When it occurs at all, it usually covers all the ground with a close impenetrable growth, scarcely broken for miles.

Up through the forest region, to a height of nine thousand feet above sea level, there are ragged patches of manzanita, and five or six species of ceanothus, called deer brush or California lilac. These are the most important of all the honey-bearing brushes of the sierra. *Chamœbatia foliolosa*, a little shrub about a foot high, with flowers like the strawberry, makes handsome carpets beneath the yellow pines, and seems to be a favorite with the bees; while the pines themselves furnish unlimited quantities of pollen and honey-dew. The product of a single tree, ripening its pollen at the right time of year, would be sufficient for the wants of a whole hive. Along the streams, there is a rich growth of lilies, larkspurs, pedicularis, castilleias and clover. The alpine region contains the flowery glacier meadows, and countless small gardens in all sorts of places full of potentilla of several species, spraguea, ivesia, epilobium, and goldenrod, with beds of bryanthus and the charming cassiope covered with sweet bells. Even the tops of the mountains are blessed with flowers—dwarf phlox, polemonium, ribes, bulsea, etc. I have seen wild bees and butterflies feeding at a height of 13,000 feet above the sea. Many, however, that go up these dangerous heights never come down again. Some, undoubtedly, perish in storms, and I have found thousands lying dead or benumbed on the surface of the glaciers, to which they had perhaps been attracted by the white glare. From swarms that escaped their owners in the lowlands, the honey-bee is now generally distributed throughout the whole length of the sierra, up to an elevation of 8,000 feet above sea-level. At this height, where the snow falls to a depth of 15 or 20 feet, they flourish without care. Even higher than this several bee-trees have been cut, which contained over 200 pounds of honey.

The destructive action of sheep has not been nearly so universal on the mountain pastures as on those of the great plain, but in many places it has been more complete, owing to the more friable character of the soil, and its sloping position. The slant digging and down raking action of hoofs on the steeper slopes of moraines has uprooted and buried many of the tender plants from year to year, without allowing them time to mature their seeds. The shrubs, too, are badly bitten, especially the various species of ceanothus. Fortunately, neither sheep nor cattle care to feed on the manzanita, spiræa, or adenostoma; and these fine honey bushes are too stiff and tall, or grow in places too rough and inaccessible, to be trodden under foot. Also the canon walls and gorges, which form so considerable a part of the area of the range, while inaccessible to domestic sheep, are well fringed with honey shrubs, and contain thousands of lovely bee-gardens, lying hid in narrow side-canons and recesses fenced with avalanche taluses, and on the top of flat, projecting head-lands, where only the bees would think to look for them.

But, on the other hand, a great portion of the woody plants that escape the feet and teeth of the sheep are destroyed by the shepherds by means of running fires, which are set everywhere during the dry autumn for the purpose of burning off the old fallen trunks and underbrush, with a view to improving the pastures, and making more open ways for the flocks. These destructive sheep-fires sweep through nearly the entire forest belt of the range, from one extremity to the other, consuming not only the underbrush, but the young trees and seedlings on which the permanence of the forests depends; thus setting in motion a long train of evils which will certainly reach far beyond bees and bee.keepers.

The plow has not yet invaded the forest region to any appreciable extent, neither has it accomplished much in the foot hills. Thousands of bee-ranches might be established along the margin of the plain, and up to a height of four thousand feet, wherever water could be obtained. The climate at this elevation admits of the making of permanent homes, and by moving the hives to higher pastures, as the lower pass out of bloom, the annual yield of honey would be nearly doubled. The foot-hill pastures, as we have seen, fail about the end of May, those of the chaparral belts and lower forests are in full bloom in June, those of the upper and alpine region in July, August and September. In Scotland, after the best of the Lowland bloom is past, the bees are carried in carts to the Highlands, and set free on the heather hills. In France, too, and in Poland, they are carried from pasture to pasture among orchards and fields in the same way, and along the rivers in barges, to collect the honey of the delightful vegetation of the banks. In Egypt, they are taken far up the Nile, and floated slowly home again, gathering the honey-harvest of the various fields on the way, timing their movements in accord with the seasons. Were similar methods pursued in California, the productive season would extend nearly all the year.

The average elevation of the north half of the sierra is considerably less than that of the south half, and small streams, with the bank and meadow gardens dependent upon them, are less abundant. Around the head-waters of the Yuba, Feather and Pitt rivers, there are extensive table-lands of lava, sparsely planted with pines, through which the sunshine reaches the ground with little interruption, and here flourishes a scattered, tufted growth of golden applopappus, linosyris, bahia, wyetheia, arnica, artemisia, and similar plants; with manzanita, cherry, plum, and thorn in ragged patches on the cooler hill-slopes. At the extremities of the Great Plain, the sierra and coast ranges curve around and lock together in a labyrinth of mountains and valleys, throughout which the coast and sierra floras are mingled, making at the north, with its temperate climate and copious rain-fall, a perfect paradise for bees—though, strange to say, scarce a single regular bee-ranch has yet been established in it. Cultivation, however, is making rapid headway over all the State, and before long, the wild honey-bloom of the mountains will vanish as completely as that of the fertile lowlands.

For the American Bee Journal.

Scorpions in Bee Hives.

ARTHUR TODD.

Have any of your numerous readers ever come across these insects living in the hive with the bees? I shall be glad to know, for I had an experience I will briefly relate, and have never seen anything in print on the subject. Having purchased a lot of Arab hives when in Algeria, next thing to do was to go and take them, for the Arab never "delivers."

The adventures of that night will not be forgotten in a hurry. There were 30 hives, all on the ground, buried in weeds; some rotten, some good, and all with communities that knew exactly how to apply the "business end" to advantage, if you only looked at them.

Well, we got to work; first some rats scared us, next a few tarantulas, as we called those immense centipedes. Suddenly my assistant Arabs called out to beware of scorpions, as I was about to disturb the stones supporting a hive composed of a long box with a tremendous population.

The job of transportation concluded, next thing was to get to work and transfer to bar-frame hives. When I came to transfer that long box the sight was splendid, as on getting a side off, combs 39 inches long and as straight as an arrow were disclosed. The bees dislodged, and the comb required cut out and inserted in the frames, I proceeded to cut out the remainder. As I reached the floor board and laid it bare, my attention was drawn to a number of little moving things, yellow, and just like crabs. Of these I killed 18, and many escaped. I was informed that these were young scorpions, and that I had had a lucky escape the night previous in not getting stung. I watched other Arab hives after that, and found them again and again, so I could come to no other conclusion, than that scorpions do frequent bee hives if allowed. In no case had these small scorpions the tail, and I would much like to know if the young of the scorpion is always minus a tail, and at what period that interesting appendage shows itself. The adult scorpion is no stranger in the neighborhood of hives, as was amply proven by my own observation.

Philadelphia, Pa.

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Grange Bulletin.

The Development of the Honey Bee.

J. M. HICKS.

The digestive organs are the most prominent, but even these consist chiefly of a large intestine and they do their work so efficiently that an immense quantity of fat is stored up in the body of the little larvæ as raw material of which the more complicated organs of the imago are built up.

The worm usually lies curled up in a half circle in its cell, and the only symptom of life that it exhibits is by scratching with its mandibles against the cell wall, as an intimation that it requires nourishment. It, however, becomes the tenderest object of solicitude on the part of the workers, they clean and rub it, endeavor by their sonorous hum to cheer it in its solitary confinement, and constantly supply it with infant food (bee bread), which they manufacture from honey and pollen, and offer to the little nursling at the point of their ligula or tongue. The whole arrangement of the attendance resembles that in the foundling hospital; the watchful nurses wander from crib to crib, from cell to cell, offering food to the little inmates, striking them with their antennæ, and fondling them with their delicate organs of nutrition. After they have been thus treated for a few days, the nurses discontinue the supply of food, and close up the orifice of the cell with wax. This operation they perform by applying a series of concentric rings of gradually decreasing circumference, one within another until there is nothing left but a small hole in the center, which is then blocked up with a particle of wax. As soon as the cell is closed the inmate sets to work and spins a cocoon of silk (which the queen larvæ accomplishes in about 24 hours, the worker in thirty-six), and then rests for two or three days. At the end of this time it assumes the pupa form, undergoing the metamorphosis from the worm structure to the insect already described; and when this is complete the imago, or fully developed insect first frees itself from its silken envelope, and then, forcing open the lid of its prison house by means of its head and mandibles, makes its escape a perfect bee.

The time occupied from the depositing of the egg in the cell to the final appearance of the insect is, for the queen sixteen days, for the worker about twenty-one, and for the drone twenty-four days.

But the labors of the worker in regard to the working of the brood, do not end here. After the young insect, be it worker, drone, or queen, has effected its escape, a number of busy nurses at once set to work and prepare the vacated cells for the reception of another egg. First one enters, and searching for the pupa-case drags it forth and carries it away to the entrance of the hive; a second follows and brings away the exuvial from the larva; and then other succeeding bees clear off the refuse, leaving only a portion of the silken cocoon, which gives additional strength to the cell.

Returning now to the history of the queen: we are told that, during her progress from cell to cell for the purpose of oviposition, she is accompanied by from four to twelve workers, who provide her with honey, and, watching all her movements, take care that she lays only one egg in each cell, or in case she should deposit more, as sometimes happens, they remove all but one, and place them elsewhere. She usually lays from two to six eggs in succession, and then rests awhile; and according to Reaumur she will thus deposit about two thousand eggs in one day. The total number laid by a single queen in one season is variously estimated at from 50,000 to 100,000 eggs.

Let us now suppose the season to be somewhat advanced, and that in the month of May the queen has deposited about 10,000 to 11,000 worker and drone eggs. At this time the workers construct half a dozen royal cells, already described, and her majesty proceeds forthwith to deposit in them the necessary eggs. The usual term of sixteen days having now expired, the guardians of one of the royal cells receive intimation, by the movement within, that a new queen is about to make her appearance, and immediately the intelligence flies from bee to bee, and they crowd around the cell in order to welcome the stranger. The queen-mother approaches also, accompanied by her body guard.

"Dear me! how interesting!" we can almost hear you exclaim, reader; "to welcome the little stranger, no doubt?" No, not to welcome her offspring, but, *incredibile dictu!*" with the murderous intention of attacking and slaughtering her as a rival. In this design, however, she is foiled by the workers that have gathered around the royal cell. These cover its entrance and keep the young queen a close prisoner; if necessary, blocking, up the opening of the cell with wax until the old queen shall have disappeared, and feeding the young one with honey during her imprisonment. In the hive of bees, as in the hives of men, Cæsars, or rather, in the former case, two Cæsarinas, cannot exist at one time; and when the old queen finds that her hateful rival is beyond her reach, she ceases to oviposit, and wandering about the hive in a state of great excitement, she at length takes her departure in search of a fresh habitation, accompanied in a full hive by about 1,000 drones, (who are said to lead the way) and ten times that number of workers.

This new colony, well known to us as the "swarm," is received by beekeepers in an empty hive, where the workers at once proceed to construct waxen cells and perform their ordinary avocations, whilst the queen at once resumes the work of oviposition.

But let us now return to the old hive, where the young queen holds undisputed possession, and this she renders doubly sure by at once proceeding to the cells that contain her younger sisters, and with her sting mercilessly destroying them before they arrive at maturity.

Sometimes, however, it happens that two young queens make their exit simultaneously from their respective cells, and by a curious instinct the old queen is then diverted from her purpose of infanticide, and at once takes her departure with her attendant swarm.

For the sequel, we must once more refer to Voigt, for we are sure you will agree with us that the account is graphic, interesting and morally instructive: "The bees that remain after the swarm has taken its departure divide into two parties, which marshal themselves around their respective queens, and then march against one another within the hive itself." Presently the armies approach one another from either side; they meet face to face; and what follows? Will the onslaught at once begin? This would indeed be the case if they were human beings, of whom thousands would rush to their fate, and streams of blood would be shed for the sake of one ruler. But no! the bees are wiser; what care they with their constitutional *regime*, whether the reins of power be held by a member of the house of Hapsburg or of Hohenzollern! let the ambitious aspirants decide the struggle for supremacy by a single combat! so say the bees, and they look on quietly whilst the duel is being fought, quite content to tender their allegiance to the survivor. The fight for the throne is merely a combat between the pretenders. Would that the human race, which conceives itself to be so wise and perfect, had, under similar circumstances, adopted this principle of action, how much less blood would have been spilt upon this fair earth whose surface has been so often fertilized by the bodies of human beings slain in battle.

Battle Ground, Ind.

National Farmer.

Colorado as a Locality for Bees.

J. S. FLORY.

When I made my first visit to Colorado I considered the propriety of engaging in the bee business here, but must say that the apparently desert plains and absence of honey producing forests made quite an unfavorable impression on my mind in the direction of apiarian science. Like the stockman on his first visit to our arid plains who declared that there was not enough grass to the acre to give a goose a decent living, I could not see otherwise that a colony of bees would soon starve here, and from the observation of others engaged in the business, I am prepared to say Colorado is well adapted to successful bee culture—at least a good portion of the State is so adapted. As it is true "full many a rose is born to blush unseen," so that there are many a thousand pounds of delicious honey in Colorado left to waste its sweetness on desert air, all for the want of bees to gather it. A man once said he lost $10,000 in one season, simply because he did not have cattle to eat up the grass on the prairies around him; in a like manner our losses in the State are great by not having the bee at hand to gather the sweets that are in nature's storehouse all around us.

Every person of experience in the Eastern States knows that warm weather, with occasional showers, are accessory to a good honey season, and that a continued drouth was fatal to the bee's harvest. Looking at the matter from this standpoint, we had our doubts in regard to our arid clime being favorable for bee culture. Our conclusions, however, now are that hot days followed by cool nights facilitate the secretion of honey in flowers better than any other state of weather. In the East the drought days usually followed by warm night, was fatal to the honey prospects; occasional showers cooled the air, and this was favorable, therefore, the temperature was of more importance than dampness. Again, continual rains destroy the honey crop, and deprive the bees the opportunity to go on the wing. Now, taking these things into consideration, and reasoning from the above alluded to hypothesis, we arrived at the solution of what seemed to be to us a puzzle: Why bees did so well in our dry climate. Our hot days followed by cool nights give to nature her sweets in abundance, and having no prolonged rains, bees have the best opportunity to improve each shining hour, and that you know, in Colorado, means from sun-up to sun down, one day after another, week in and week out. Thus we see instead of Colorado being a poor country for bee-culture it is just the reverse.

Of the many honey producing plants that abound in our State, the despised and much abused cactus, probably stands first; then in their season, we have goldenrod, aster and thousands of others. All we need to make honey an important item of wealth added to Colorado's prosperity, is an awakened interest in the matter and bees to gather the honey. Nature makes the honey, we want the bees to gather it.

To secure success, in the first place, we want the Italian bee, it being more prolific, more hardy, and a climate more akin to ours, we think them far superior to the common black bee. Second, a movable hive. Third, colonies should be kept strong in numbers and rich in stores in order to stimulate to early breeding. Fourth, enough apiary science to give one the knowledge the queen bee is not a king, but the mother of the whole colony; that an abundance of drones are a nuisance, being a class of tramps that live off the industry of others, but few should be allowed to be reared. Fifth, common sense enough to know how and when to make artificial swarms, and when to leave these alone; too many colonies are killed by kindness—too much attention. The fatal mistake with many, is wanting to get along too fast.

For the American Bee Journal.

The Best Comb Foundation.

J. V. CALDWELL.

I have been taken to task by Mr. Heddon for presuming to say the Dunham foundation is a "first-class" article. Well, the meaning of this, as I infer, is when the article fulfills, in a perfect manner, the purpose for which it was made, then I say it is a first-class article, and when I say the foundation I make does fulfill its purpose, I do not wish Mr. Heddon to doubt my word, as I certainly shall not doubt any assertion he may make in this discussion.

Mr. Heddon thinks my foundation has been found fault with; well, I desire to say that any of my customers of this season have the liberty to make any statement they wish to, either in public or private. Because I have succeeded in making the Dunham machine a success (which Mr. Heddon has not), he infers I must be a better mechanic than he is. The fact is, I have never had the advantage of a mechanical trade. Mr. Heddon gets the impression I am of a conservative turn of mind, and do not want the best bees, etc. Well, I must admit I have not yet gone so far as to claim, with Mr. Heddon, "that all intelligent and unprejudiced men admit evolution to be a fact;" but I do like the best of everything I can get, Dunham foundation included. I have had at least one customer who tried the Given foundation, and did not want any more. I have never tried it myself, as, so far, the Dunham has answered all purposes in the brood chamber, and this is all I use it for making, and using as I do the thin Vandervort in the sections. Mr. Heddon infers when I say I have my combs drawn out in a "perfect" manner that I must have compared them with one that had dropped from the frame, which is something that does not happen in my apiary. The Given foundation has not always given satisfaction, as Mr. Heddon well knows. The editor of the BEE JOURNAL tried them together, and was satisfied the Dunham was superior. The Dunham machine is considered a good one by bee-keepers all over the country (excepting, of course, those who do not know how to use it properly). I have no doubt the Given foundation is a good article. Any foundation would be when backed up with a wire factory. What we need is a good foundation without the necessity and extra expense of hardware to make it acceptable to the bees. I claim: First, that the Dunham machine is the best made; and, second, that I can print more good sheets of foundation on it than can be made on any press machine yet made, and I stand ready to make the claim good in any fair and honorable manner.

Cambridge, Ill., Aug. 29, 1882.

[At the time we tested the two makes of foundation together, we found the Dunham much superior, or, rather, much preferred by the bees, and soonest worked; but since that time, as we are informed, there have been great improvements made in the Given dies, and we presume it may now be equal, in every respect, to the Dunham; and should it be this, surely it is good enough for all practical purposes, in the brood chamber. The wash used on the Given foundation when our experiments were conducted, undoubtedly had much to do with its failure.—ED.]

For the American Bee Journal.

The Common Sense Hive.

WM. CAMM.

In a late number of the JOURNAL, Mr. Demaree, of Ky., condemns the Common Sense bee hive as a swindle. I think he is too severe. About one year ago an elderly gentleman, by the name of Barnes, called and stayed all night with me. He was a thoroughly posted and practical apiarist and believed in his hive. Upon leaving, he insisted upon my taking a hive for trial, and left one, which I did not fill till this summer. It is a good hive, but would not suit me. It is very convenient, as you can slide the cover either way to examine brood frames or brood nest without disturbing the other. The bottom is hinged to the body and has a hook in front, so as to make it fast or loose as you wish. The frames are deeper than wide, so that it is a good winter hive. My objections are, that it is too small; that it has no cap and hence the space immediately over the brood nest is lost; then, I prefer a frame that is wider than it is deep—the reverse of this. It is, however, exceedingly simple and easy to manipulate, which makes it a good hive for farmers and those who are not accustomed to handling frame hives, hence it will serve a very useful purpose in the way of introducing intelligent bee-culture. Mr. Barnes was associated with his son, a wounded and disabled officer of Indiana volunteers, during the war. I afterwards visited them at Jacksonville, Ill., and was both pleased and instructed. though I openly objected to the hive. Mr. H. W. Hitt, of Merritt, Ill., bought the right to make and vend it in this (Scott) county, and though I see nothing about it to patent, yet Mr. Hitt has done well in using it himself this year, and many to whom he has sold are much pleased after trial. I have no interest in the matter except a desire to see fair play. As I have said, I do not want the hive for my own use, but believe it will do good by leading people to use frames, and hence better hives. With a mixture of Syrian blood in my queens, I shall be forced to adopt a larger hive than any I have now, though one, No. 19, takes 25 frames, 10x12 inches, and forty-two 2-lb. sections. Bees are booming.

Murrayville, Ill., Aug. 30, 1882.

SELECTIONS FROM OUR LETTER BOX

Drone Brood.—I commenced this spring with one colony of black bees, in a box-hive; transferred them to a Simplicity hive on the 24th of May; divided them on the 10th of July, giving the new colony one frame of larvæ from 2 to 3 days old; had 6 queen-cells started next day; 3 queens were hatched on the 24th of July and upon examining the hive I could only find one queen, the others I presume, must have been destroyed, as well as the remaining cells. On the 28th of July I found my new queen on the ground in front of the hive, with a quantity of bees around her. I picked her up and put her in the hive. The next day was very chilly and damp. Since then, for about 2 or 3 weeks, we had very unfavorable weather. Now, this new colony has about half a frame of capped brood in worker cells with the caps raised considerably higher than in the old hive; 5 cells, which to me, from their shape, look like queen-cells, as well as cells with 2 to 4 eggs in each. Will you please let me know, through the Weekly BEE JOURNAL, the cause of the trouble, and how I can remedy it.

ROLLAND MACDONALD.

Montreal, Can., Sept. 1, 1882.

[The first queen hatched destroyed the others and the remaining cells; or it was done at her instigation. The brood capped over is drone larvæ, and the cells which have the appearance of being queen-cells are undoubtedly filled with drone larvæ. The queen, if there is one in the hive, is probably the one picked up; she failed to meet a drone and through injury or other cause has been unable to go out again, and has become a drone-laying queen, while the bees, realizing the situation, have attempted to rear a successor for her from the best resources they had—drone larvæ. You had better give them two or three frames of capped worker brood and one with eggs or newly hatched worker larvæ, to give an opportunity to rear a good queen. Should the weather prove favorable. and she become mated. you will yet save that colony. It is the only chance, unless you introduce a good, prolific queen.—ED.]

New Courage Added.—The cloud with the silver lining has at last hove in sight, bringing with it an atmosphere freighted with the scent of fragrant autumn flowers. The heretofore despairing hopes of many bee-keepers in this part of the country have changed to those of rejoicing; the unfolding of each additional species of flowers, seems to add new courage to many whose hopes seemed blasted but a few weeks ago. For the past few days the honey flow has been very great; many colonies that were scarce in stores but a short time ago are now full in both brood and surplus departments; new boxes are frequently added, which are filled in a short time. A fair crop is now almost ready to harvest; if this cloud with silver lining should be so broad as to be a month in passing over, what would we poor fellows do? Bees swarming and honey running to waste, for want of storage! The weather is fine, bees are booming, honey rising, glucose on the decline, fixtures in good demand; let the good work continue.

V. H. ORMSBY.

Pierpont, O., Sept. 4, 1882.

Harvest about Ended.—Our harvest is about ended for this year. We have had a fine crop considering what our bees had to contend with; the basswood and plum blossoms failing; white clover was rich with honey, and we have had several honey-dews, one occurring yesterday. The bees work lively on the leaves while the dew is on them. Bee men in this county are scarce. A good many lost heavily, and concluding it did not pay, quit the business.

C. FOLLETT.

Osage, Iowa, Sept. 4, 1882.

Ready for the Fair.—Our bees are booming here now. I took from one colony, last Saturday, 77 pounds of comb honey, and had before taken 46 pounds from the same colony. The honey was in sections with foundation. I have extracted from another colony 116 pounds, and taken 10 one-pound sections. Both of the above colonies were divided in June. I have just finished extracting, and am ready for the fair.

J. L. STRONG.

Clarinda, Iowa, Sept. 5, 1882.

Late Swarm.—I send you a couple of weeds for name; they grow plentiful in low places, and my bees are on them a good deal. Please let me know what they get from them. I had a large swarm of Italians to-day. It is so late I am afraid they will be too weak to winter. I gave them 4 frames of honey, which left 5 empty frames with no foundation. 2. Did I do wrong in giving them full frames? 3. Give me the best plan to do with them? They are gathering honey fast now; the buckwheat will be out of bloom in a day or two. It has been a poor year in this section for bees. I had 9 colonies in the spring and have only had 4 swarms. I have only one colony that is working in the top boxes. and they all came out strong in the spring. 4. Is it a common occurrence for bees to swarm before the young queen is out of the cell? I examined the parent colony after it swarmed, and found the queen-cell capped. 5. Do you think the young queen will meet a drone this fall? There is only one drone flying, but there are some drones just hatching in the parent colony.

GEO. KEMP.

Navan, Ont., Aug. 31, 1882.

[1. The yellow flower is a solidago, of which the goldedrods are also species. The bunch of pink flowers are *P. hydro-piper*, for which there are almost a score of common names, among which are smartweed, heartsease, blackheart, etc. Both are good honey plants and late bloomers.

2. You done right.

3. With plenty of bloom of which you sent specimens, and your empty frames full of foundation, we think you will have no trouble in wintering, especially with the four frames of honey you gave them.

4. Yes; they do so as a rule—perhaps always.

5. Yes; if the weather is favorable. Bees never swarm naturally, under favorable circumstances, without making ample provision for a perpetuation of the parent colony, hence they are as scrupulous to provide forthcoming drones as queens.—ED.]

Honey from Celandine.—Bees are booming now and I have just been to ascertain what source they are gathering from. A large tract of low land covered with trees and bushes, near here, was burned over at the time of the drouth last fall, and this season is covered with celandine in full bloom, which is just swarming with bees to the exclusion of nearly everything else. I have extracted 527 lbs. from 37 colonies—all that they gathered from clover and basswood, and increased from 44 to 66, with a good prospect of getting enough for winter from celandine. Nearly all of the bees have their backs covered with white pollen, which adheres to them in crawling into the peculiar shaped flower. Have any of the

readers of the Bee Journal had a like experience? There seems to be occasionally an oasis in this State, but here the season for surplus has been the poorest in 10 years. If my hopes are realized, I shall consider that bee-keeping pays even in such a season as this, with all its contrary weather.
W. H. S. Grout.
Kennedy, N. Y., Sept. 4. 1882.

Preparing to Feed.—The long drouth has been very hard on my bees—no rain to speak of since July 18. I have several colonies that will not get honey enough to winter on. 1. When shall I commence to feed? 2. Are there any sweets that I can make a good syrup from, that will cost me less than A sugar.
W. A. Small.
Waltham, Mass., Sept. 5, 1882.

[1. Commence feeding soon as satisfied they will need it.

2. There is nothing cheaper than A sugar that we would recommend.—Ed.]

Why is It?—I have one colony of bees that has been carrying out brood for about 4 weeks. The brood is in all stages, from larvæ to full grown. They were transferred June 12. The colony is an old one, from which no swarms have issued either this or last year. Please give the cause of this destruction of brood, and, if possible, a remedy?
Wm. Glennon.
Williamstown, Mo., Sept. 2, 1882.

[The queen in that hive, or the strain of bees, are good for nothing as workers, and they are probably in a starving condition. The only remedy we can suggest, is to supersede the queen and give plenty of feed.—Ed.]

Quite Cheering.—My bees, since the last of June, have done well. My crop this far is 9.000 pounds of very nice extracted honey. The weather is now fine, and honey is coming in fast. If the good weather holds, I shall get several thousand pounds more.
O. Clute.
Iowa City, Iowa, Sept. 4, 1882.

Bees on a Spree.—Old Sol has scarcely shown us his blushing face this summer. Great black clouds have hidden it completely; but whether or not these clouds are lined with silver I cannot say, still, this I know, they are brimfull of rain, and they have copiously sprinkled the country with that cooling beverage, and that they, or something else, have filled the flowers with honey. Everything that grows, from a skunk-cabbage to a rose, seems to bubble over with nectar. The bees are on a spree for the first time in three years. One would think that they swarmed for mere recreation. They come without end, and, like riches, "betake to themselves wings and fly away." From 5 colonies in the spring I have lost 7 or 8 swarms, and yet have a decent increase. One swarm I hived three times, and the last time I gave them a frame of brood, but they evidently thought very little of babies, for they filed out again and sought some "leafy bower among the wooded dell," and oh, such tempers as they have, too. Nothing seems to give them more pleasure than to jab five minutes of profanity and physical activity into the unsophisticated looker on. Is the Swiss wax extractor patented; if so, by whom is it held?
F. L. Dresser.
Hillsdale, Mich., Sept. 4, 1882.

[It is not patented.—Ed.]

Solidago. — Please give name of plant enclosed. and its value as a honey plant; bees work on it very much. It grows 5 to 6 feet high in waste places, and there is a splendid flow of honey from it when the weather permits the bees to fly.
Frank A. Eaton.
Bluffton, Ohio, Sept. 2, 1882.

[It is a solidago, to which family the goldenrod also belongs. The solidagos are all good honey plants. —Ed.]

A Few Good Days Needed.—My honey crop will be short this season unless we have favorable weather from this time until the last of the month or later. I have a great deal of nice honey which a few days would get capped so I can crate it.
H. W. Anderson.
Gibson's. Ind., Sept. 6, 1882.

No Let Up.—We are having the largest and longest honey flow I ever knew in Illinois; there has been no let up here since it commenced, the first week in June. Bees continue to swarm, notwithstanding some have divided them and taken other plans to prevent it; but swarm they will, and some are the largest swarms I ever saw. I divided a colony (No. 6) and left the queen in the old hive, and in about 3 weeks afterwards the parent hive cast 2 swarms on the same day, one about 9 a.m., and the other at 2 p.m.; both swarms had queens, and are now making surplus honey. This is something new in my experience, and I write to know if it is a common occurence among bee-men. I have a garden near my bees, sown to buckwheat, and it has been in bloom over a week, but I have never seen a bee work on it. Can you tell me the reason, and what is the best kind of buckwheat for honey?
A. W. Fisk.
Bushnell, Ill., Aug. 1, 1882.

[It is not unusual for two swarms to be cast almost simultaneously; and in the case cited, the queen was superseded or lost in the division. As to the bees not working on the buckwheat, it was because the bees found a better flow in something else. We doubt if there is much in buckwheat as regards honey flow, although it is claimed by some that the silverhull is much the best.—Ed.]

Crooked Combs.—I am a beginner in bee-culture and wish to grow into it as fast as I can with my limited means. I have a lot of 1.59 acres in town, but there is considerable vacant land about me. I bought one colony of bees in a Langstroth hive in July, put a second story on in August, took two frames of brood and honey from the lower and put in the upper story, had no foundation, so I filled it up with empty frames. Aug. 30, having received foundation, I opened the hive and found that the bees had been building crooked, crosswise, etc,; also there was a queen-cell on one of the old combs which I had taken from the lower part, capped over. I took out the empty frames and some of the worst of those that had comb and honey, and inserted frames with foundation. I wish soon to introduce a new queen, but the lower frames are so badly stuck together by comb built between, that I do not know what to do. Will you please inform me through the Journal? Also whether you think I can make it a success here in town?
J. M. Foote.
Creston, Iowa, Sept. 1, 1882.

[You had better let them remain as they are till apple bloom, then transfer them to hives with foundation. Adopt Mr. Heddon's system of transferring. You can make a success of bee-culture in town, if you do not aim to keep more than 100 to 200 colonies; by planting waste places with sweet clover, catnip, motherwort, etc. By planting a little each year, your bee pasture will increase with your bees, and you will scarcely realize the expense.—Ed.]

The Swarming Fever.—There are many things in the bee papers that I do not swallow quite. I have tested the anti-swarming plans this year, and for several years, but I have no sure way yet. The new swarm on the old stand has answered about a third of the time this year. Cutting out queen-cells does not amount to much with Italians; giving room is of small account; changing and room, and cutting out will work tolerably. Result—no sure way, when the honey flow is good. Change, with room, and you will succeed nearly every time. Just a little living amount of honey, and the Italians will swarm and nothing can stop them. Bees have done well, but honey is rather scarce. Too much rain. Amount for July 5.65, Aug. 6 inches; nice drizzling showers and often, good weather for crops but poor for honey. White clover extra bloom, but honey washed out by the frequent rains. Basswood the same. Prospect for fall flowers is extra good, and if frost holds off, may pile up the honey. I do not think the market will be glutted with honey this fall. I sell all of mine at home and could sell much more if I had it. I think I never had nicer honey than I have had this year. But no great rush. Hives filled with bees and working well but honey comes in slow. Guess the crowds of brood take extra food. Did you ever know a colony to hunt out old hive and go back after 55 days—I had one this year. I changed them but they found the old hive and went there to my loss of one colony. I saved the hive of comb and honey as I put them on a hive that looked like swarming. I like the JOURNAL and like to read the various opinions therein. Heddon's head I guess is level, but a little, just a little crooked maybe. Bless you, what do I care for notions? I have mine too. Now, Mrs. Dunham's foundation suits me. If other makes are better, it is very good indeed. I have used it and know it is good. Maybe there are better makes, but the Dunham is good enough for me. It has never failed, never sagged, and is worked out speedily, that's good enough I think.

J. R. BREED.
Embarrass, Wis., Aug. 31, 1882.

A Second Queen.—I would like your opinion in regard to the conduct of a queen which has lately come to my notice. A friend has a colony which I divided in June, and which I have been endeavoring to get a laying queen into since without accomplishing my purpose, till about two weeks ago. Having failed in the endeavor to introduce a laying queen, I allowed them to rear one from brood given. I looked at the colony, when, from the appearance of the cells, I judged that the queens would hatch the next day and on the ninth day afterward I found eggs and larvæ; so that the queen must have begun to lay when five days old. Five days after I looked into the the hive, my friend says that while sitting by the hive he saw the queen emerge amid some confusion of the bees, and take wing. He took out his watch, and in just five minutes she returned and entered the hive. She remained ten minutes, when out she came a second time, amid the same confusion of bees, ran up the side of the hive, took wing and was gone fifteen minutes, when she again entered the hive, and the commotion among the bees ceased. Do you think she was taking a second wedding flight?

JAMES MCNEILL.
Hudson, N. Y., Sept. 4, 1882.

[The cells were not all destroyed by the first queen hatched and a second one was hatched, which either destroyed the first queen, or she was driven from the hive.—ED.]

Never Knew a Better Year.—When I put my bees on their summer stand they were heavy with honey and strong in numbers; the weather was favorable until the 10th of April, when it set in wet and cold; then there was the fruit bloom, box elder, dandelion and the golden willows. There was scarcely a day that the bees could fly. On the 26th of May, while walking through my bee yard I noticed young bees crawling about the hives and aligthing on the grass. Wondering what that meant I opened the hive and found all the honey gone. I at once gave them 3 lbs. of honey and 5 lbs. of sugar, as clover was just coming into bloom. On the first of July the lindens began to open their buds to the busy bees, and continued to bloom on the low lands until the last days of July. In my 15 years' of bee-keeping I never knew a better year than this for surplus honey. I do not know the exact number of pounds I have taken, but I have a fine lot of comb and extracted honey. At this date the bees are carrying in honey quite fast, and swarming most every day, until I think I am safe to say that I have returned 50 good swarms to the parent colonies since they commenced to swarm in May. As I am a farmer and stock-raiser, I do not follow bee-keeping as a business. My 60 colonies have paid me better than any thing I have this year.

HIBERT CLARK.
Palmyra, Iowa, Sept. 1, 1882.

Extraordinary Work.—Perhaps we have the best day's work extracting on record—four men and a boy extracted 1,700 pounds in 7 hours. This work was done with a four-frame Excelsior extractor, the boy running that, while the four men manipulated the hives and done the uncapping. Our crop will exceed 25,000 pounds.

CHAS. DADANT & SON.
Hamilton, Ill., Sept. 7, 1882.

Not so Bad.—Honey harvest in Canada is not so bad on the whole. It was very slack in July, but has been fair in August, and even yet there is a good deal coming in. I have 7 strong colonies from 2 in the spring—part by dividing and part by natural swarms. Will sweet clover yield honey next year if planted now?

C. W. YOUNG.
Stratford, Ont., Sept. 2, 1882.

[It will yield a little late in the season.—ED.]

Outlook is Good.—Bees have done nothing in the way of surplus honey till within the past two weeks, since which time they have been working in the sections very rapidly. The outlook is good for a fair yield at this time.

H. S. SEE.
Geneva, Pa., Aug. 31, 1882.

Goldenrod in Bloom.—My bees are doing very fairly now. Goldenrod has just began to bloom.

S. S. KARN.
North Manchester, Ind., Aug. 30.

Nothing Like It.—Bees are booming. I have never seen any thing to compare with the present run of honey.

JOHN A. WILLIAMSON.
Lodge, Ill., Sept. 7, 1882.

Excessive Swarming.—We have had a fair season for honey in this part of Ohio, since the middle of June. My colonies have increased from 17 to 43, and will give at least 700 lbs. of comb honey, and are in good condition. Dr. H. S. Conklin's apiary has suffered from excessive swarming. His bees began to swarm early in June, and are still swarming. One or two others here are having trouble in the same way. The market for comb honey here is fair; the demand, I think, will exceed the supply at 25c. per lb. We are using Mr. J. S. Hill's Langstroth double-walled hive, which has been a success with us this far.

W. B. SPENCE.
Sidney, O., Aug. 31, 1882.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

☞ We will send sample copies of the BEE JOURNAL to any one who will distribute them to bee men at Fairs. We will also send some large colored posters to enable them to get up clubs. Write to us and say how many copies you wish and we will send them post paid. See our premiums for clubs on another page.

☞ The Amerian Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

Paid orders are filed in the Treasurer's office, and always accessible for reference, and the remitter gets a receipt for money sent.

For safety, when sending money to this office, all should get either a post office or express money order.

☞ Articles for publication must be written on a separate piece of paper from items of business.

☞ The *Prairie Farmer*, one of our old and valuable exchanges, comes to us with sixteen pages of reduced size, and change of name to the *People's Illustrated Weekly and Prairie Farmer*. The illustrations are fine, paper excellent, and print and appearance artistic. Price remains as heretofore, $2 a year.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

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20c. per agate line of space, each insertion.

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◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club :

or a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

◆

☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

☞ Hundreds of clergymen, doctors and others have used Kendall's Spavin Cure with the best success. 37w4.

◆

☞ According to Edwin Alden & Bro.'s American Newspaper Catalogue, just issued, there are 12,158 newspapers published in the United States and the Canadas. Total in the United States, 11,522; Canadas, 636. Published as follows: Dailies, 1,152; Tri-Weeklies, 80; Semi-Weeklies, 150; Weeklies, 9,078; Bi-Weeklies, 23; Semi-Monthlies, 202; Monthlies, 1,290; Bi-Monthlies, 12.

GERMAN CARP,

For stocking ponds, Goldfish, Silver Pearl, Fringe Tails, Golden Orfes, etc. For particulars, address

MUTH & ECKARDT,
37w2m Mt. Healthy, Hamilton Co., O.

HEADQUARTERS FOR

Sweet Clover Seed,

also **MOTHERWORT** and **CATNIP** Seed. Send for prices.

A. SNYDER,
37w2t Clarksville, Albany Co., N. Y.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., September 11, 1882.

The following are the latest quotations for honey and beeswax received up to this hour :

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 16@20c. on arrival; extracted, 7@10c. BEESWAX—Firm at 20@25c. per lb.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb honey is steady at 18@20c. Some extra nice 1 lb. packages have sold at 22c. No demand for dark combs. Extracted honey in kegs, barrels and casks, 9@10c. Demand better than for months past.

BEESWAX—25c. for prime yellow; dark 18@22c.

R. A. BURNETT, 165 South Water St.

CLEVELAND.

HONEY—Still selling at 21@22c. per lb. for best white 1 lb. sections; 2 lb. sections, 20c.; second grade, 18@19c. Extracted has taken a little start, and 60 lb. cans as well as 5 lb. tin pails sold at 14c. Sales of honey have been quite light the past week or two, owing to the good supply of fine home-grown peaches.

BEESWAX—Scarce at 25@28c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—There is abundant inquiry, but the majority of buyers are not disposed to pay full prices. Offerings are light, and no large receipts are anticipated.

We quote white comb, 18@20c.; dark to good, 12@15c. Extracted, choice to extra white, 9@9½c.; dark and candied, 7@7½c. BEESWAX—28@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—We quote at 7@7½c. for strained in bbls. and half bbls., 8@9c. for extracted in cans and kegs; comb, 18@20c. per lb. Larger values of strained and extracted apply to the lesser pkgs.

BEESWAX—27@28c. per lb.

R. C. GREER & CO., 117 N. Main Street.

NEW YORK.

HONEY—No quotations reported.—ED.

BEESWAX—The supply is moderate and prices held about steady, though very little doing. Western, pure, 27@27½c; Southern, pure, 28@28½c.

D. W. QUINBY, 105 Park Place

BOSTON.

HONEY—Market active. We quote ½ lb. combs 30c. per lb.; 1 lb. combs 22@25c.; 2 lb. combs 20@22c. Extracted, in half bbls., 12@14c.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

Advertisements.

Bees---127 Colonies for Sale.

I will sell my Park Ridge, Ill., Apiary very cheap. Locality good, market convenient, everything complete. Have more bees than I want. Address COFFINBERRY, 925 W. Madison st., CHICAGO.

Sweet Clover

SEED.

I have received a shipment of new crop Sweet Clover Seed, and can now fill orders at **30c.** per pound, **$4.00** per peck, or **$15.00** per bushel.

ALFRED H. NEWMAN,
37wtf 925 West Madison Street, Chicago,

New Kegs

FOR HONEY.

In order to satisfy the demand for small packages for Extracted Honey, I have heretofore procured kegs intended for syrup, fish, lard, etc., and in view of this growing trade, I now feel justified in having made to order a **Special Keg**

Designed Expressly for Honey.

These I am obliged to buy in large quantities in order to supply them at popular prices, and procure a package not used for any other purpose. They are made of Norway Pine, and have from 7 to 9 chine hoops on each end.

I have tested a sample keg by filling it DRY with white clover honey, and without the heads being painted.

It neither leaks nor flavors the Honey.

It is not necessary to paint the heads, but when painted I will guarantee them not to leak, and if well scalded, the pine **will not flavor the honey.**

Capacity, 175 pounds........Price, 80c. each.

The first car load of these kegs will arrive about Sept. 10th, and all orders will receive my prompt attention.

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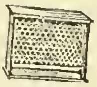

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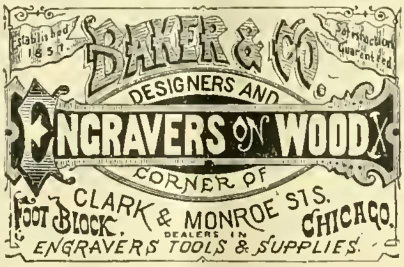

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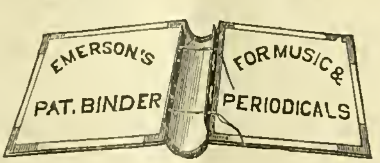

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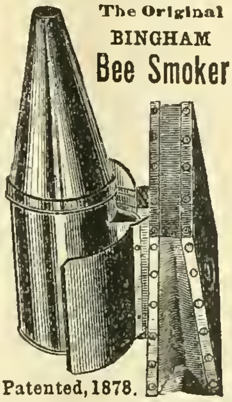

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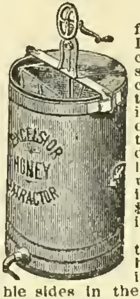

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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.................................... 593
Bee and Honey Show at Toledo, Ohio..... 593
Sending Queens by Mail or Express........ 594
The Honey Crop and the Market............ 594
Foundation Making 594

Among Our Exchanges—

Adulteration of Food.......................... 595
A Phenomenon 596
Characteristics of the Coming Bee 596
Negro Bee-Keepers............................ 596
Song of Rejoicing............................... 596
H. W. Lee's Apiary............................. 596

Correspondence—

Bee-Keeping in the Great Northwest...... 597
Does the Bee Injure Grapes?................ 597
Understanding a Locality..................... 598
How I Shall Winter My Bees................. 598
Holy Land Bees.................................. 598
Progress of Apiculture in 30 Years 599
Effect of Cold and Consumption of Food. 600

Convention Notes—

West Texas Bee-Keepers' Association 600
To All Bee-Keepers in Wisconsin.......... 600
Convention Notices............................ 600
The National Convention..................... 601
Local Convention Directory.................. 601

Selections from Our Letter Box—

Moving Bees...................................... 601
Building Up...................................... 601
Still Gathering Honey......................... 601
Much More to Learn........................... 601
An Amateur's Success 601
Robbing... 602
Harmless Moth.................................. 602
On the Jump..................................... 602
Feeding for Winter............................. 602
Floral Specimens 602
Hooks for Tops of Frames.................... 603
Still Swarming................................... 603
Botanical 603
Late Clover Bloom 603
Done Well.. 603
To Clean Moth out of Combs................ 603
Value of "Bees and Honey"................. 603
When Shall I Feed? 603
Inferior Honey.................................. 603
Toads and Bees 603
Nuclei Storing Surplus 604
About an Average Season.................... 604
Good Fall Honey Crop......................... 604
Bees Booming Yet.............................. 604

Bee and Honey Show at Toledo, Ohio.

Such a grand success was this new feature of the Tri-State Fair, that the managers have already promised the Bee-Keepers' Society all the space they may desire at the Fair for next year.

The small corner set apart for the Bee and Honey Show was so crowded all the time, that it was with great difficulty any one could get through the crowd, and utterly impossible for one-quarter of those who desired to examine the exhibits, to even get within a stone's throw of them. The exhibits covered all kinds of supplies used in the apiary, besides comb and extracted honey put up in all the most desirable ways, and a lot of beeswax. There were also full colonies of Italian bees; nuclei containing Cyprian, Syrian and Italian queens, and queens in separate cages. These goods were all on sale, and the receipts from sales paid the exhibitors very well without taking into consideration the premiums awarded.

The bee-keepers present formed an Association, of which Dr. E. B. Southwick was elected President, and Dr. A. B. Mason, Secretary. As a report of the proceedings may be expected from the Secretary, we shall not particularize, except to say that the Association appointed a committee to confer with the Managers of the Tri-State Fair in reference to the details for a very large Bee and Honey Show there next season. So well did the present one succeed, that the bee-keepers, with one accord, agreed to give the next Show of Bees and Honey their most hearty co-operation.

The popularity of the bee and honey exhibit at the Tri-State Fair is but a repetition of the experience of the managers of the Inter-State Fair at St. Joseph, Mo., last season, and the great Toronto Exposition of last year, and but confirms the impressions we entertained when we first urged upon Fair Executive Committees to give apiculture the liberal recognition it deserves. It is still more gratifying to know that the bee-keepers themselves so soon realize a benefit from these public aids to their enterprise.

◆

☞ The *Rural New Yorker*, which is very reliable authority on all matters, says: "The honey crop will be a good one this year, notwithstanding the discouraging prospects early in the season. The yield will be light in Europe, and California will probably not have much for export. Good honey, put up in proper shape and carefully graded, will find ready sales. It should be marketed in no other way. Neat packages are attractive."

◆

☞ By reason of poor health, Mr. James Heddon was not able to attend the bee and honey show at Toledo, O., last week, but he intends, if well enough, to attend the Northwestern Convention at Chicago, October 17th.

◆

☞ A call has been issued for a meeting of bee-keepers to take place at the office of J. D. Chaplin, Esq., in North Manchester, Ind., on the 30th of September, 1882, at 1 o'clock p.m. There are many bee-keepers in that vicinity, and all are invited to be present and assist in organizing an association.

◆

☞ The Rev. W. F. Clarke passed through Chicago last week on his return from Manitoba. He also spent a day with Mr. James Heddon, *en route.*

Sending Queens by Mail or Express.

On the 25th ult. we received from Mr. I. R. Good, Nappanee, Ind., a cage containing 10 worker bees, accompanied with the following explanation: "I wish to call your attention to the cage I use, and the food placed in it for the bees and queen. I do not lose one queen out of 100, sent in these cages, with this kind of food. If you wish to try the shipping qualities of the cage, mail it to some person in Texas, or at any other distant point, and have him return it to you. The bees will stand a journey of two weeks, and be none the worse for wear and tear."

The cage, with the bees bright and lively, was immediately mailed to Dr. W. R. Howard, Kingston, Texas, where they arrived Aug. 30th, and by him remailed to us on the 31st. Dr. Howard wrote us: "The bees arrived in good condition to-day—not one dead—all lively, and not in the least restless; not more than ¼ of food consumed; the food seemed to be in a good, moist condition. With the amount of food, and in their present condition, I should think they were good for a journey of 1,000 miles more."

The cage reached us the second time on September 4th, with the bees still in good condition, except with one dead and one debilitated; but the food had become quite dry and powdered, being scattered throughout the apartment occupied by the bees. We moistened some granulated sugar with liquid honey and placed it in the food cavity, and on the following day again mailed it to Dr. Howard, where it arrived Sept. 8th.

The Doctor acknowledged its receipt in the following language: "Bees came to hand yesterday; 5 bees were alive when received, but this morning only 1 remains alive. The feed appears to have been too damp, and daubed the bees somewhat. I will send the cage with some bees on a new food I have been experimenting with of late; will give you formula at some future time if it proves worthy. Please return, if alive, or send to Dr. J. P. H. Brown, Augusta, Ga., with request to forward to me if alive. It is almost too late in the season to experiment much with bees in transit except in the South. In the event you send to Dr. Brown, have him write to me, as well as yourself, the condition of the bees on arrival." Dr. Howard's remittance of bees were received at the BEE JOURNAL office Sept. 12th, all alive and apparently in the best condition.

We are inclined to the opinion, had Mr. Good's experiments been instituted in mid-summer, when the weather was sufficiently warm that the bees could readily clean each other, and be free from chilling while in an exhausted condition, or had the food we gave them been in a less moist condition, the period of survival would have been lengthened from 16 days to perhaps double that length of time—or in other words, that it might be possible to mail queens in these cages, with this article of food, from accessible points in the United States and Canada, to Italy with perfect safety.

Mr. Good's cage is made from a block 3½ inches long, 1 inch thick, and 1½ wide, in which are bored two 1 inch auger holes, connecting, and ¾ inch deep, which are mortised into one, to serve as an apartment for the bees, at one end; a second hole is bored at the other end of the block, disconnected from the bees, except by a ¼ inch hole, for the bees to pass through to the feed, which is placed in the 1 inch cavity. A piece of wire-cloth covers the whole cage, and over this is tacked a thin piece of wood, with a hole cut in, to furnish air to the bees. A ¼ inch hole is also bored in the side of the cage, through which the queen and workers are put inside, and this also is covered with wire-cloth, to furnish air, in case the top of the cage should become covered while in the mail pouch.

For food, Mr. Good uses granulated sugar, which is prepared by putting in plenty of liquid extracted honey, and after allowing it to stand a few days, pouring it into a dish or box having a wire-cloth bottom, which allows the excess of honey to drain out,

Here is a most powerful illustration of the efficacy of pure food for consumption in long confinement, and the combination of the cane sugar with the liquid of the pure honey seems to meet all the natural requirements of the bees. There is a hallowed proverb which reads, "He builded better than he knew." Can it not be possible that Mr. Good has exemplified it in his experiments for a transit-food, by discovering and proving the solution of the great wintering problem. Certainly, the results possible are worthy of the most diligent experiments and observation. Should it prove successful; the response from thousands of bee-keepers would resound throughout America—"Good! Good! Good!"

The Honey Crop and the Market.

Mr. J. M. McCaul, with Thurber & Co., of New York, gives the following review of the honey crop for 1882, in a recent number of the *Bee-Keepers' Exchange:*

> The outlook for the honey crop of 1882 is but little better than that of 1881.
>
> After returning from the Golden State, and placing California's crop of honey in 1878 at 720,000 pounds, about a quarter crop may be looked for there this season, some 180,000 lbs. of this amount (about 90 tons), according to the best available reports, will constitute the excess of honey produced in 1882 over that in the previous year. New York state, a leading honey producing center, will run short of its general good average, but this deficiency will be offset by gains in Illinois, Michigan and other western states, which produced less than usual in 1881. California promises a quarter crop this year, against a total failure in 1881. This will constitute the surplus over the quantity of honey marketed in 1881. The heavy honey year in California was 1878, the crop has not equalled the output of the bee since that date. The taking up of alternate sections of land for grazing and allowing sheep to range across the intermediate plots, tend to destroy the blossoms on which the industrious bee has depended. A fire swept across a county or two in Southern California two years ago, and all verdure was destroyed, this discouraged the bee-keepers, as well as the bees. Although by next season the present prospect is that honey blossoms will be fairly plenty once more. This explains the failure of the honey crop in that state last year. But the probability of recurrences of fires, together with the grazing trouble, point to the steady reduction of the honey product in California from now on, unless measures are taken to cultivate bee food in the canyons and elsewhere, which plan is meeting with serious consideration with California bee-keepers.

Mr. McCaul's estimate is quite up to, or a little over the amount for California, but for the country at large he is, perhaps, a little under. The *Exchange* intimates, editorially, that Messrs. Thurber & Co. may be over-estimating the crop "in order to bear down the prices," as they are this season buying as dealers, instead of selling on commission as last year. We do not believe, however, that the estimate is excessive, but, rather, under the actual yield, and while we express this opinion candidly we do so with an honest conviction of its truth, and accompanied with the advice to producers that honey is worth as much and should realize as high figures, or higher, than last year, for several reasons, first of which is that the whole crop, even if one-third larger, is not as great as the consumption will be. Secondly, the quality is much above an average, and should command more for its intrinsic value. Third, the demand from abroad will be much larger than ever before, and will pay an advance on former prices if the product cannot be bought at a less rate.

That the home consumption will be much larger than ever before we feel convinced, as bee-keepers are awakening to the necessity of educating our people to use it more freely, and are adopting more readily every facility for familiarizing the public with a genuine article, and its desirableness as a pure and wholesome article of food. In this connection the Expositions and Fairs are doing more good, remunerative work, than could be accomplished by years of patient individual effort, and it is refreshing to witness the alacrity with which bee-keepers are availing themselves of these popular methods of public instruction; and it is safe to say that the domestic consumption will be rapidly increased to double its former extent, and thus on almost without limit.

In view of the partial failure of the limited honey crop in Europe, and the heretofore popular demand for a pure article of American honey, no one can for a moment doubt that later on the foreign demand will be very heavy, especially when it is remembered that their fruit crop this season is very limited, and honey is, perhaps, its most natural substitute. In our own markets the demand, though healthy and substantial, is not so eager yet as it will be later on, owing to the plentiful and superior small fruit crop; but when this is entirely cut off by frost or expiration of season, the retail demand for honey will likely brighten up, and with a more eager retail market, jobbers' prices will advance, and the demand from first hands or producers become more competitive.

In this connection it is interesting to note the general favor with which smaller—very small—packages are being received. In the Boston market last week, as will be observed by reference to the market column in the Bee Journal, Messrs. Crocker & Blake report the market active, with honey in ½ pound sections selling at 30c. per pound; in 1 pound sections at 22 to 25c., and 2 pound sections at 20 to 22c. Mr. Kendel reported a demand in Cleveland for extracted honey in packages ranging down from 60 to 5 pounds, at 14c., and 1 pound sections at 1 to 2c. higher than 2 pound sections. Messrs. Greer & Co. reported extracted honey in kegs and cans at 2c. higher than in barrels and half barrels; and in our own market (Chicago) Mr. R. A. Burnett quotes white comb steady at 18 to 20c., with some extra nice 1 pound sections selling at 22c. per pound. Thus it will be seen that the public demand and ready prices, are singularly corroborative of the Bee Journal's oft-reiterated advice, to carefully grade all honey, put it up in small packages most convenient for consumers' use, and make its appearance as attractive as possible. Although the grade may possibly be the same, a more attractive small package will find the quickest sale at a much higher price. Above all, do not by any means use second-hand packages of any kind, more especially kegs or barrels. Anything wooden which has once contained liquid, will be found impregnated with a flavor that will prove detrimental to a fine quality of honey, and either depreciate its value in market, or entirely ruin its sale. It will be found lavish economy.

◆

Foundation Making. — Prof. Cook, President of the North American Bee-keepers' Society, has issued the following circular:

To the Manufacturers of Foundation Machines:

Many have expressed a desire that all of the foundation machines of the country may be at the National Convention, and that foundation may be made so that all may see how they work. While visiting that Goliah of American bee-keepers, D. A. Jones, of Beeton, Canada, last week, he showed me how beautifully the Dunham machine worked, and the fine foundation that it would produce, and said that if Mr. Heddon could do better with the plates, he wished to see it done at the National Convention. I could not help uttering a vehement amen. I remarked that we should also wish to see the one who has done so much for foundation, and foundation machines, A. I. Root, there, with his roller machine, and with the great praise that has been given to the Vandervort foundation, which as we all know that have used it, is well earned, we want as much to see that machine work. Now I wish to suggest that Mr. A. I. Root bring a cistern and wax reservoir, that C. F. Muth furnish wax, and that every manufacturer bring his machine, and we all see them tried. We all know that Messrs. Muth and Root, so full of generous purposes are they, will not refuse to do as suggested above. Such an exhibition would be not only very interesting, but would prove a wonderful educator. I hope that all of you, Mrs. Dunham, and Messrs. Vandervort, Given, and Root will at once express a willingness to comply with the above request, which is the wish of a host of bee-keepers that intend to be at Cincinnati.

Lansing, Mich., Sept. 7, 1882.

☞ Other bee papers please copy.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Adulteration of Food.—Hon. W. I. Chamberlain, Secretary of the Ohio State Board of Agriculture, in the last number of the *Country Gentleman*, gives a mental analysis of a breakfast table which he failed to enjoy, and which he characterizes as follows:

I hastily made a mental analysis of the coffee, and it would be about thus for a pound package:

	Per cent.	Per pound.		Value in a pound.
Rio coffee	.20	0.20	lbs. at 20c.	$0.04
Peas	.40	0.40	" 2c.	0.008
Chicory	.20	0.20	" 4c.	0.008
Lord knows what	.20	0.20	" (?)	0.000(?)
				$0.056

Or the value per pound would be about five and one-half cents; or, as pure green Rio, by the quantity, is only ten and one-half cents per pound it would make the prepared coffee cost the manufacturer or adulterator about three cents per pound, and he sells it at fifteen cents or more—a reasonable compensation for grinding and mixing.

A similar analysis of the other articles was about as satisfactory. The sugar was part glucose. The milk was perhaps watered; perhaps from cows fed on glucose meal or sour slops. The buckwheat cakes were 20 per cent. buckwheat, 20 sorghum seed meal and 60 wheat middlings. The butter to put on the cakes was made not of cows' cream, but of cows' tallow, doctored chemically and churned with skimmed milk, on the principle of letting the chicken wade through the broth to make it chicken broth. The syrup to put on the cakes was thick and salvy—20 per cent. cane syrup, 75 per cent. glucose, and about 1 per cent. sulphuric acid!

"O, isn't that a dainty dish to set before a king!"

Disgusted with the coffee, I called for tea, but it never saw the populous shores of China or Japan. The vinegar was not from cider, and the pepper and spices used in cooking had lost a part of their essential oils in some great factory. The canned fruit and preserves had glucose syrup, thick, and of fine "body," but with little sweetness. My stomach said no to such a breakfast, and I hastily withdrew into the open air to let it utter its protest. I served that breakfast just as the whale did Jonah, and with far better reason, for such a breakfast was not more than half so digestible!

Is it too much to hope that when our Solons have sufficiently protected our crops from adulterated food, they will also protect our stomachs ?

◆

A Phenomenon.—Wm. C. Casson, of Addison, N. Y., sends an extract from the Addison *Advertiser*, giving the following account of a curiosity in that city. Mr. Casson says: "What a pressing invitation for the Doctor to commence an apiary":

> Dr. John Mitchell, of this village has a curiosity on his premises, on Front St. In the back part of his lot stands a small apple tree, and in that tree is one of the largest swarms of bees that we ever saw, that have hived themselves in the open air, they have already got comb hanging down from a limb larger than a half bushel nearly filled with honey, and they are working away filling the comb and preparing to enlarge.

◆

Characteristics of the "Coming Bee."—The following suggestions are by the editor of the *Bee-Keepers' Guide:*

> What shall be the standard physical characteristics of the coming bee ?
>
> That advancement may be made toward producing *Apis Americana*, it is important that an impression of its physical characteristics be given, and that this impression or representation of the coming bee should be the effect of causes and conditions that will produce those qualities which are to bring forth the best honey gatherers and hardiest race. Breeders of bees, in the same manner as poultry and stock breeders, should have a standard of excellence and make an effort in the line indicated. While it is true that we select queens that are yellow nearly their entire length for breeding purposes, and charge the highest price for them, we have come to believe from experience that such queens are not always the best.
>
> For reasons we will presently give we are inclined to favor the queen that resembles a fine worker bee. She should have three distinct yellow bands and the remainder of the abdomen should be proportionately like a worker. Yellow queens are produced during very warm weather in strong colonies, and we regard the conditions as not being favorable to produce energetic, hardy and long-lived queens. Because of the fact that much heat is necessary to produce the yellow queen we believe the color to indicate weakness. When colonies increase naturally, at the capping of the first queen-cell the bees swarm and leave the old colony quite weak for the following eight days, while the young queens are maturing, and the queens produced in this manner show more black or dark rings than they would, had only the queen been removed and all the bees allowed to continue the high temperature while the queens were being developed. We find that a large number of queens perish before they become fertile during extremely warm weather, and we believe heat to be the cause.
>
> Some of the largest and finest yellow queens are short lived, and especially the very large ones. A certain amount of heat is required to produce vigorous animals and plants; a little more heat may promote a more rapid growth, but produce weaker animals and vegetation. We believe that extreme heat should be avoided as much as a temperature so cool as to produce dark and inferior queens. We mean that while the queen breeder keeps his breeding colonies strong and comfortable during the early spring, he should be equally careful to keep them cool and comfortable during the heat of summer, by reducing their strength and supplying shade. In other words, we advise a mean temperature for breeding colonies in order to secure queens, that are uniform in color, can resist cold, endure heat, and to insure longevity.

◆

Negro Bee-Keepers.—Referring to Mr. E. C. Jordan's query, "Why do negroes not keep bees ?" on page 378 of the BEE JOURNAL, the editor of *Southern Industries* remarks as follows:

> Perhaps as the editor of that valuable journal never said or heard of negroes who were successful bee-keepers, we offer to suggest that the negroes in this portion of the South prefer leaving the management of these busy, honey-making *stingers* to their white brethren, they taking only the trouble of lifting the contents from the hives after nightfall, or during the absence of the industrious apiarists. When bees are not domesticated, and beautiful clear honey produced by them, "Sambo" as a *pis aller* will content himself with that made by the hard-working wild bee. It is safe therefore to conclude that the negro has a great fondness for honey, fears not the sting of the producer, but simply does not care to deprive the white man of the exclusive privilege of experimenting, raising fine colonies, and wearing the title of "Apiarist."

◆

Song of Rejoicing.—The *Nebraska Farmer*, of this month, gives vent to its exultation, over the bountiful harvests, including honey, obtained in Nebraska during the present season, in the following language:

> As our state is blessed with a bountiful harvest in nearly all the rural products, it is well that we should rejoice, and that each specialist should make known the results in his department. Bees have been no exception to the general rule. The early season was too cold and damp, but as it advanced, it brought flowers ladened with honey, which incited the bees to rapid breeding, and in June swarms began to come out freely, and have continued to ever since; yet August has been their gala day. Swarm after swarm have issued, until the increase has been from 300 to 400 per cent. and the flow of honey has been so great that they quickly fill the hive, and then the boxes with honey, and gladden the apiarist's heart. Reports from most parts of the state give like results.
>
> The State Board of Agriculture have given us great inducements to make a display at the coming fair. With the means at hand it is no more than right that we should do our best in appreciation of their efforts in our behalf. Therefore, let everyone turn out who can, and exhibit honey, bees and apiarian supplies. There is nothing that will advance our interests better than lively competition. It will incite us to greater effort, and make better bee-keepers of us. It will attract the eye of the consumer, and increase the demand. It will induce others to branch out in the business, and much of the sweetness that is now wasted could be utilized by the bees.

◆

H. W. Lee's Apiary.—A correspondent of a Rockford, Ill., paper, gives the following description of a visit to the apiary of H. W. Lee, at Seward, Ill.:

> His farm is in the township of Rock Run, Irish Grove, and about three and one-half miles north of Pecatonica. As a bee farm, its location could not be very easily improved, for these industrious honey-gathering insects are enabled not only to gather the sweets from clover, buckwheat, etc., but also from wild flowers and basswood blossoms, which abound in those quiet "sylvan shades." Mr. Lee has been an apiarist for twenty years, and has been a diligent student of bee life, in all its varying phases, consequently he is thoroughly informed on the subject. He had 120 colonies last spring, but now has 200 colonies, or in the neighborhood of 7,000,000 bees. This apiarian metropolis covers two acres of ground, has six rows of hives, and is laid out as regularly as the city of Philadelphia.
>
> The present prospect is that he will have not far from three tons of honey to put upon the market this fall. The largest yield he ever had in one year was four tons. He has a machine for extracting honey from the comb, and also another for making foundation. Besides his bees, Mr. Lee has also a fine lot of grapes and blackberries.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

CORRESPONDENCE

For the American Bee Journal.

Bee-Keeping in the Great Northwest.

WM. F. CLARKE.

Having just taken a trip into and partially through the region above-named, I propose, while the subject is fresh, to jot down for the AMERICAN BEE JOURNAL a few impressions of the country, apiculturally considered. My tour extended from St. Paul to Winnipeg, Manitoba, thence westward, 409 miles to the last rail of the Canada Pacific Railway, returning to Winnipeg, thence east to Hawk Lake, about half way to Thunder Bay on Lake Superior; again returning to Winnipeg, thence, via Minneapolis to the Jim River Valley, Dakota, and from there to Chicago, where I now write. The Great Northwest I take to comprise the vast tracts of land north and west of St. Paul.

At present, and if properly farmed for all time, this region, taken as a whole, may, without impropriety, be considered the world's largest and grandest wheat-field; beginning with the famous Red River Valley in Northern Minnesota, and stretching northward to the limit of cereal culture, and westward to the Rocky Mountains; it may, almost without exaggeration, be said to be one mammoth wheat field, the like of which is not to be found on the earth's surface. The only part of this field that can be said to be fully worked, is the before-mentioned Red River Valley. There I saw a sight that made me open my eyes wider than they were ever stretched before. Wheat on either side of the railway track, from thence apparently to the horizon; much of it standing, more of it reaped or in course of reaping by the wonderful self-binders that convert standing grain into sheaves as if by magic; miles of it in shock; teams busy hauling dry sheaves to the steam threshers that were puffing and buzzing on every hand; men bagging the threshed grain; and, again, more teams hauling to the nearest elevators.

Here are the big Bonanza farms, of which we have read and heard so much. All through my westward journey, and more than as far again, there is a strip of at least 500 or 600 miles wide, capable of presenting just such a spectacle as I saw in the Red River Valley, and in the course of a very short time it will present a similar spectacle. These immense wheat areas are fast filling up with a population that will speedily become comfortable, if not rich. I don't think this mammoth wheat field will ever be much of a bee country. The summers are too short; the winters too long, and the thermometer gets too far below zero. Fancy wintering bees where the mercury sometimes dips down to 60° below zero! But these thrifty wheat farmers will all have parlors, or at any rate kitchens, where their queens and princesses will sit "eating bread and honey," that is, if they can get the honey, as they will be able to do, if bee-keeping spreads itself in those more genial regions where it can be practicably and profitably carried on. These are not very far to the south of this mammoth wheat field of the world.

I do not know what is the limit of paying apiculture in Minnesota, but there is a limit, a line of north latitude beyond which bee-keeping, as a business, cannot be carried on. Beyond that limit, there will soon be a market for honey, which bee-keepers had better keep an eye on; a market in which all other products that are not native bring high prices, and a market, too, in which the luxuries, as well as the necessaries of life, are in brisk demand, for this remarkable region is not being peopled with a poor, economical and struggling class, but mainly with those who have come from the Eastern States and Provinces, with more or less means. Their aim is to be able to boast in the shortest time possible that they possess all the delicacies they left behind them, and they will not leave honey out of their catalogue.

I do not pretend to have made a thorough apicultural exploration; my trip was too hasty for that, and I am only jotting down impressions. But let me now advert to a region which, I believe, presents large scope for bee-keeping. I refer to the far-famed Jim River Valley in Dakota. Before seeing this highly-favored spot of earth, I thought it had been overpraised. Now that I have been there, I am ready to say with the Queen of Sheba, "the half was not told me." I have seen much of the earth's surface in general, and of the continent of America in particular, but this, to my mind, judged from an agricultural standpoint, is the gem and crown of it all.

The climate and soil must have some peculiar qualities, for here, from four to six degrees farther south than the Manitoba wheat areas, "A No. 1 hard" can be, and is, grown in all its primest excellence. At the same time, the Indian corn is as good as in Illinois; water and musk melons grown on the open prairie, without hot-bed forcing, were ripe, luscious and abundant when I was there, Sept. 6 and 7. But bees don't suck nectar from melons, though boys and "children of a larger growth" are wont to do so. Let me say, then, that asters, boneset, goldenrod, and innumerable flowers were in a blaze of glory at the dates named, all over the untouched prairie. Such a magnificence of floral beauty, I never saw on this broad continent before in the month of September. This means an abundant fall honey harvest, the great desideratum for successful and profitable bee-keeping.

I have often regretted that I am not more of an apicultural botanist, and never did so more sincerely than as I gazed upon those gorgeous Dakota prairies a few days ago, for I would like to be able to name well-known honey plants, which I am sure luxuriate there. It is the same all the season through. From early spring to nipping frost, those prairies are one vast flower-garden. There are no wild bees, so far as I could learn. Trees are conspicuous by their absence, except along the river banks and bottoms, and there the growth is not large enough to allow of a hollow trunk sufficient to accommodate a colony of bees. If there were natural hives, I question if "wintering on their summer stands" would work, for even in the Jim River Valley the mercury sometimes falls pretty low. But no country was ever better adapted for cellar or clamp wintering. That peculiar soil of which I have spoken, requires no walls of wood or masonry when a cellar is dug in it. Cover an excavation with a shed or building, and the walls remain as intact as when they were first shaved down with a sharp spade. I saw cellars of this kind that have been in use for three or four winters, and there is no crumbling of the walls, while such a thing as a damp cellar is unknown, except so far as the dryest earth has a trace of dampness in it. No rotting boards to mar the sweetness of the air; no solid walls of stone or brick to stop the pores and forbid capillary circulation. Surely, this is the paradise of cellar or clamp wintering for the bee-keeper.

My visit to this charming valley answers the question I have often asked, viz.: is there not a region somewhere on this continent suitable for isolated queen-breeding, where the season is of sufficient length to make the business profitable? Mr. Jones' islands are too bleak and inhospitable to make it other than a costly business to breed absolutely pure queens there. When I was at his place early in June, operations on the islands had not yet begun. In the Jim River Valley spring opens as early as in New York, Southern Ontario, Northern Illinois, or Central Michigan, and the season is as long. Here, then, is an opening for some enterprising man who wants to raise dollar queens that have only to be mated to be infallibly all right. I have no doubt this fine valley will, ere long, swarm with bees and bee-keepers. I met with one man, a carpenter, who was working at house building "on the distant prairie" several miles from his own house, who took a few colonies to the Jim River Valley this spring, and regretted his inability to look after them, for they both swarmed and gathered honey to an extent he never saw equaled in all his life before.

Sept. 14, 1882.

Scientific American.

Does the Bee Injure Grapes?

T. T. ROBERTSON, M. D.

It has long been believed, and is now almost universally accepted as a fact, that the bee destroys grapes and other fruits. I have watched the little workers for years, and have been loth to believe it. I observed long ago that they never attacked sound grapes.

But when defective, or split as the result of a rainy spell, they would then suck out the juices. Being unable to convince others of the harmlessness of the insect in any other way, I devised for that purpose the following experiment, which any one may try for himself.

I placed at the mouth of the hives bunches of several varieties of thin-skinned grapes, and for days, although the bees were constantly crawling over them, not a berry was injured. I then punctured half of the berries on each bunch, and instantly the bees went to work on all so punctured, in a short time sucking them dry. The remainder of the berries were untouched and remained so until punctured by me, when they in turn were attacked as promptly as the former.

This experiment demonstrates that it is necessary for the grape to have been previously injured so as to allow exudation of juice; otherwise the bee will not molest it. I have not observed so carefully in the case of other fruits, but it is my belief that this is the *modus operandi* in all cases.

Rot, splitting of the grape, injury by insects and birds (in this latitude a small yellowish bird is conspicuous), are the causes that render grapes liable to attack by bees. And when we reflect that the berries thus injured would decay, it will be seen that the bee actually saves to us what would otherwise be lost, by storing it up as honey.

I have been hurried into this communication, by observing that in some quarters legislative action is about to be taken against an insect which I believe closer observation will demonstrate to be not only innocent of harm, but productive of good.

Winnsborough, S. C.

Bee-Keepers' Magazine.

Understanding a Locality.

G. M. DOOLITTLE.

One of the important factors of successful bee-keeping is a thorough knowledge of the locality in which we reside. Many bee-keepers do not seem to realize the importance of this, as their actions show, for if they did they would not be asking "if the basswood had blossomed yet," as did a bee-keeper a few days ago.

All work with the bees to be successfully done, should be done with an eye open to the probable time of the blossoming of the main honey plants in our locality. For instance, if white clover is our main honey crop we must commence operations with the bees at least six weeks previous to its blossoming in order to insure a good yield from it, for it takes at least six weeks to build up a colony so it will be able to do the best work on a given field of blossoms. Hence as white clover blossoms in this latitude about June 15th, we must commence to get our bees ready for it as early as the first of May. Now, by so doing we get the bees in time for the harvest which means success. But supposing basswood, which opens July 10th to 15th to be our main harvest, we having but little white clover, not more than enough to keep the bees breeding, then the commencing to stimulate the bees for this harvest as early as the first of May would be labor thrown away, as well as a useless expenditure of honey used in producing bees to loaf around waiting for the harvest.

What man is there having a field of wheat requiring the labor of 20 men to harvest the same, who hires these men two weeks previous to the time the wheat is ripe? When shall we learn to use common sense in regard to bees as we do in other things? For a man to talk of getting his bees strong and ready to swarm in April by means of artificial heat in this latitude, as some have, shows a lack of good common sense on this point.

Again, if our bees are weak in the spring and we do not get them ready for that harvest until after the harvest is over, they become merely consumers instead of producers, or worse than useless. It would be like the man hiring his twenty men to harvest his wheat after it had become ripe and spoiled in the ground.

Thus it will be seen that to be the most successful we must have a full force of bees just in the right time to take advantage of the harvest. In order to do this we must study our locality and know the time our honey producing flowers open, and thus we shall gain a knowledge that will enable us to reap a rich harvest of honey when honey is secreted in the flowers.

Borodino, N. Y.

For the American Bee Journal.

How I Shall Winter My Bees.

J. A. BUCKLEW.

I submit for your criticism my plan of wintering my bees the coming winter. I ask all who have had experience in wintering bees by burying them in clamps, or in the ground, to tell me what they think of the following plan: I will have 40 good colonies and 10 nuclei, all Italians, with about 20 lbs. of sealed honey to the colony, and the nuclei about 10 lbs. each; all in Simplicity hives.

I shall dig a trench two feet deep and three feet wide, in dry sandy soil, sloping to the south; in the bottom will put one foot of dry straw; one foot from the top I will put two rows of scantling on which to set the hives; will place hives about six or eight inches apart, leaving them on their bottom-boards with caps off, and a sheet of burlap over the frames; between, around and over the hives I will put dry straw, but not pack tight. Around this I will build a rail pen commencing one foot from the hives on each side, and by drawing in, bring it to a point over the center of the hives; over this pen I will put straw six inches thick, and cover all at least one foot thick with earth. At each end of this pit I will have a four-inch pipe to enter the ground at least ten feet from each end hive; these pipes will extend under the bees and terminate about half way to the center.

At the center of this pit I will have another pipe to start just below the hives and extend through and above the pit about six feet; the ends of these tubes will be made to keep out mice, snow and rain, and still give ventilation. In this shape I propose to leave my bees until they can gather pollen next spring.

This has been a very fair honey season with us. After bees commenced work on white clover there was no gap in the honey flow, as is generally the case. White clover lasted at least two weeks longer than general, and the golden honey plant and goldenrod were in bloom before white clover was done. Bees are gathering honey yet, working on red and Alsike clover, buckwheat, Spanish needle and asters; also, on the excrement of aphides or plant lice, and this last means dysentery, if they have any of it left to winter on. I believe the coming winter will be almost as destructive to bees as that of 1880-81. Bee-keepers should be prepared for it at any rate.

Forty acres of Dr. Tinker's golden honey plant this year would have given me more honey than the thousands of acres of white clover on which my bees worked. It is the best honey plant, in my opinion that I have ever seen; it has grown wild here for many years, but I am sorry to say it is migrating or going down stream, the older plants up stream die out; the seed is carried down stream by high water, and come up farther down every year. Success to the Weekly Bee Journal.

Clark's, O., Sept. 11, 1882.

Gleanings in Bee-Culture.

Holy-Land Bees.

E. R. ROOT.

It may seem strange to some, that I, occupying so favorable surroundings, should hold aloof from the general contribution in common with our many bee friends; but deeming it better to "go slow," and give our older and wiser heads the field, I have thus far stood back, thereby correcting a few of my hasty conclusions and immature opinions.

Lately my attention has been so greatly drawn toward the Holy-Land bees that I cannot refrain from saying a few things in their favor, although they are surrounded by some prejudices. That they are very prolific, all, who have handled them will admit; from whence it would naturally follow that their generative qualities would tend especially toward raising cells; this, in our experience, has been decidedly the case.

I will mention one or two instances, not because they are remarkable in themselves, but to show that this is one of the characteristics of the race. On the 5th of July we were somewhat short of cells, and in taking my usual rounds through the apiary, I came to a Holy-Land colony from which the queen had been sold. The state indicated that the bees had killed a dollar queen caged there, and had served two just hatched in the same manner. In consequence of this determination to build cells, the colony had been queenless about ten or twelve days. On picking up one of the frames I found a young hatched queen; and on another, I counted upward of 25 cells. As we were at this date short, and the queen a fine tested Holy-Land, I determined to avail myself of this fine lot of cells. After cutting out perhaps half a dozen, and laying them on the side of the hive, I was about to proceed further, when, looking down, I discovered that three of the six had hatched. I immediately set back the frame, and disposed of my young queens wherever most needed. I again commenced at the cells, and after having cut out three or four, found two more queens hatched, and another fast gnawing out. I placed my ear near the comb containing the cells, and could distinctly hear the nibbling of the queens within. This indicated very plainly that they would soon all be out. I therefore hastened to put the remaining cells along with the two hatched queens, into the nursery; soon after, another lot was in turn brought there, as I feared they, too, would hatch on my hands, as did the others. Nor was I mistaken in this.

After resuming my work, John told me that the queens were running loose in the lamp nursery in every direction. I hastily cut out the cells yet remaining in the hive, and once more started for the nursery. Sure enough, on arriving there my eyes were greeted with a sight that really made me feel quite happy, as they were just in time to supply the demand of the colonies. These queens, with a single exception, all hatched within thirty minutes; and were so remarkably strong and healthy that some attempted to fly, and one did succeed partially. No time was lost in giving them to queenless colonies; but, unfortunately, we were not as successful in rearing them all. This date (5th of July) in our locality was about the intermission of the flow of honey between clover and basswood; in consequence of which, the bees, not having much else to do but mischief, killed a part of them.

Out of the number that were accepted, a few could be introduced only by vigorously smoking their colonies at the entrance. The queens are now laying, and are so exceedingly large and fertile that my honored *pater* pronounced them to be some of the finest queens he ever saw.

At another time, John and I counted in four Holy-Land colonies, 82 cells: this number is only their fair average yield. Whenever we are in need of a "raft of cells," as we term it, the brood of a Holy-Land colony is exchanged for that of an imported stock. By that means we can obtain as many cells as we need; whereas the imported stock, left to itself, probably would not raise over 6 or 8 cells, and it is not uncommon for them to have only three or four.

Now, in summing up a few of the good features of the Holy-Lands, we find, from the above facts, first, they raise a great abundance of cells at one rearing; secondly, the cells are started so that they hatch at or nearly the same time; lastly, if the cells are not too much disturbed, the queen will hatch out strong and healthy.

Now, a word in regard to the Holy-Lands as honey-gatherers: My experience has led me to think that they are equally as good as the Italians, and some say a little superior. Being originally reared in a hot, dry country, they have necessarily been obliged to gather honey at every opportunity available, or the race could never have existed. In this country, they of course manifest the same energetic disposition; and hence, as far as my observation goes, gather some honey after the basswood flow, even when the other bees are apparently inactive.

After what has been said, I would not have it understood that I have any the less regard for the Italians than before; but, on the contrary, all things considered, I think they possess many qualities far superior to other races of bees, and will probably always retain the front rank.

My object in writing this is not to give the Holy-Lands undue praise, to the exclusion of the Italians, but to bring forth a few of the good qualities which are justly their due. I do not deny, that the Holy-Lands have a few bad features; but these, I think, have been fully discussed before.

Medina, O.

* * *

Home Farm.

Progress of Apiculture in 30 Years.

L. F. ABBOTT.

During the last thirty years great discoveries have been made in the natural history and general management of bees. And while the habits and instincts of the honey bee are the same to-day as thousands of years ago, the methods employed to develop and utilize their value and enable the bee-keeper to prosecute his business with intelligent oversight have been numerous and very valuable, because mainly practical in their application to the end sought, namely, the improvement of the stock; to acquire a knowledge of the habits of the bee; better to utilize their labor, hence greater profits; the latter mainly the greater desideratum of the Yankee mind.

The invention of the movable-comb frame hive introduced by Mr. Langstroth about 1850, opened up a wide field of study; in fact it was the invention of the age as regards intelligent bee-keeping, and upon it has hinged most of the progress that has been made since. By its use we were enabled to go inside the hive and prove those things at which naturalists had hinted. It enabled us to practice artificial multiplication of swarms, or prevent natural swarming when desirable. That bees, deprived in any way of their queen, had the means to rear another one, had long been known, but till now the knowledge was of but little practical value. Now we are enabled to rear queens at will; to become acquainted with their good or bad qualities and to breed and perpetuate the one or discard the other; and also if another race of bees is thought to be superior to the ones we are breeding, the movable-frame enables us to introduce foreign stock without loss.

Science has also demonstrated that to elaborate and build comb causes bees much labor, and that it is at the expense of a large quantity of honey. Take an ordinary bee-hive of 2,000 cubic inches capacity and to fill it with nice new combs requires labor sufficient to bring in thirty pounds of honey, and the elaboration of wax to form material for the building of the combs requires thirty pounds more. We find that sixty pounds at least of honey has been the cost of filling each hive. Enterprising bee-keepers sought to obviate in some measure this outlay, and the result has been the honey extractor whereby the newly closed cells are uncapped and the frames with combs attached are taken from the hive, the bees brushed off and then placed in the machine and rapidly revolved, emptying the honey from the cells and then the combs replaced in the hive to be refilled and the process repeated when advisable.

Twenty years ago, had some timid apiarist ventured to suggest the possibility of making artificial comb which the bees would readily accept and utilize the same as their own, he would have been a fit subject for a lunatic asylum; but nearly as long ago as that the embryonian idea took root in the brain of the late Samuel Wagner, and the result has been the production of foundation comb that can be attached to the frame and placed within the hive and as readily used by the bees for all purposes as their own.

These are some of the wonderful results that have accrued by the application of certain principles in accordance with the no less wonderful instincts and habits of the honey-bee.

But while the results of the new light that has dawned upon the bee-keeper's pathway has been to lead to grand achievements in summer management of the apiary, the successful wintering of bees has not yet come to be demonstrated by any set rules however carefully observed. Comparatively speaking, it is easy to successfully manage the apiary during the warm months, for success hinges very much upon whether the season is auspicious for honey gathering; but during the winter and spring the bee-keeper often finds all his wisdom at fault. There are a few rules it is well to observe, and these when put in practical use are as near right as any we have tried. To be brief, for this article has already exceeded its proper limits, let us observe:

1. Bees in the movable-frame hive are not in their normal condition; hence, some means should be adopted to prevent a low temperature within the hive. Such condition is best afforded by wintering in a dry cellar.

2. The larger the mass of bees con-

solidated together the less susceptible are they to a low temperature; hence by the first of November remove a frame and put the remaining ones farther apart, also cut passage ways through the combs to enable the bees to communicate freely through each sheet of comb.

3. Quietness is essential to their prosperity, hence the hives need to be placed in a dark cellar, and if the cellar is used for other purposes put a partition across the room so the light may not disturb them.

4. A current of air continually passing from beneath up through the hive is detrimental to the health of the bees; then contract the entrances and leave small spaces between the combs and bottom board; place quilts upon the top of frames, remove the caps from the hives and keep at a temperature of 40° Fahr., higher than this will cause uneasiness, lower will do no harm.

5. Be sure that each hive contains at least 15 pounds of honey; disturb as little as possible until spring. These rules followed your losses will be less than in any other way.

Augusta, Me.

* * *

London Journal of Horticulture.

Effect of Cold and Consumption of Food.

A. PETTIGREW.

On page 566 of the American Bee Journal we have, through the kindness of Mr. Alfred Neighbour, the opinions of Dr. Dzierzon on other questions of importance. He says, "The milder the winter the more complete will be the repose of the bees, and the lower will they be able to allow the temperature to become even when they have their winter quarters, while increasing cold stimulates them to breathe more frequently and to consume more food; in other words, it stimulates their vital powers to greater activity in order to be able to offer the necessary resistance to cold in winter."

Theory and experience, as well as the last mild winter, demonstrate to me practically the fallacy of this opinion. Exposure of the bees to extreme cold certainly causes them to crowd together into as thick a cluster as possible, but it does not send them into a sleep-like state of repose; on the contrary, it startles them out of their rest, compelling them to hum more loudly, while previously they were in perfectly silent repose. Nor does severe cold prevent premature breeding. There is generally more brood to be found in the hive in January and February, when the weather is very cold or after the temperature has been very low, than during a continuance of mild weather. Dr. Krasicke acknowledges this fact, but explains it in a peculiar manner by saying, "that because bees consume more food when temperature is low the production of chyle would also be greater." All this and more than this seems to be no more than theory and speculation, and not supported by facts or experience.

My own experience, extending over a period of fifty years, and the experience of many practical and observing bee-keepers, go quite in an opposite direction, and prove that the colder the winter or weather is, the less honey is consumed by bees, and this stands to reason as well as experience. In cold winters bees sit closely together for weeks and hardly move. There is in such seasons little waste and wear, and little food is required to make good the waste. In warm winters there may be heard a hum night and day in good hives—the bees set loosely together, move about among one another, and often take outdoor exercise. The waste of body is greater, and a greater quantity of food is required and eaten to make good the waste.

The last warm winter is referred to by Dr. Dzierzon in support of his new theory. English bee-keepers know that during the last open winter the consuption of food was great—unusually great, and hives were unusally light in the spring months of this year. That bees consume much more food in warm winters than they do in cold ones is a fact well known long ago, and every year's experience confirms it. This theory of Dr. Dzierzon reminds me of the strange notion of a Swiss clergyman, who boldly stated that two swarms of bees united do not eat more in winter than each of the swarms would do if kept separate. This was received as the truth by a large circle of apiarists, some of whom tried to explain it on scientific principles. Of course they failed, and when told years afterward that 10,000 bees required twice as much food as 5,000, they believed this and said no more about the discovery of the Swiss clergyman.

If bees eat more food and breed sooner in a cold house and in a cold winter than they do in a warm house and winter, the system of contracting space in bar-framed hives cannot be too soon abandoned and condemned, and hives with cavity walls are quite a mistake if Dzierzon's views are correct.

Bowdon, England.

CONVENTION
NOTES

West Texas Bee-Keepers' Association.

In consideration of the great interest that is now being taken in scientific bee-keeping in Western Texas, a number of bee-keepers met at the office of T. C. Greenwood, in Luling, on the 2d inst., for the purpose of effecting a temporary organization to be known as the West Texas Bee-Keepers' Association. Although with only a few days' notice, there were 420 colonies of bees represented, with a product up to date of about 32,000 lbs. of honey. After some spirited discussion, it was deemed advisable to postpone the organizing of the permanent Association until the 1st of November, 1882, so that those living at a distance may have an opportunity to come and take part in said organization.

The following gentlemen were elected officers of the temporary organization: J. S. Tadlock, President; T. C. Greenwood, Vice President; Thos. Balcomb, Secretary; P. H. Callahan, Treasurer.

We respectfully invite all the readers of the Bee Journal living in West Texas, or any part of the State, to try and make it convenient to be present, that we may permanently organize and discuss the many interesting topics in connection with the best management of bees for our Southern climate. Thos. Balcomb, *Sec.*

* * *

To all Bee-Keepers in Wisconsin.—At the next annual meeting of the North American Bee-Keepers' Society to be held Oct. 3d, in Cincinnati, Ohio, Vice Presidents of each State are expected to report the condition and industry of bees in their respective States. This can only be done by the help of bee-keepers living in different parts of the State, and I wish that every bee-keeper interested would, as soon as possible, send me a report of the condition of bee-culture in their section, to wit: How many colonies had you in the spring? How many on the 1st day of May? How many did you sell after the 1st day of May? How many have you now, and have they enough honey to winter without feeding? How much surplus honey did you take? How much of this was extracted, and how much comb? How much wax did you get? What hive do you use? How do you increase—by natural or artificial swarming? How was the weather in the spring, summer and fall—wet or dry, cold or hot? I hope all bee-keepers in this State will respond and give me an answer to the above stated questions, so I will be able to make a correct report from this State.

Christopher Grimm.
Vice Pres., for Wisconsin.
Jefferson, Wis., Sept. 14, 1882.

* * *

☞The Northwestern Bee-Keepers' Convention will meet at Chicago, Ill., on Tuesday and Wednesday, Oct. 17 and 18, 1882. The office of the American Bee Journal has been kindly tendered as a place of meeting. A cordial invitation is extended to all bee-keepers, and especially those of the Northwestern States, to be present. The meeting takes place during the last week of the Inter-State Industrial Exposition, to enable all to obtain reduced railroad rates. First session at 10 a. m. C. C. Miller, *Pres.*
C. C. Coffinberry, *Sec.*

☞ The bee-keepers of Boone Co., Ind., are cordially invited to meet at the office of Barton Higgins, in Lebanon, Oct. 9, at 9 o'clock, a.m., to complete the organization of the auxiliary County Bee-Keepers' Society. The bee-keepers of Hendricks county, Ind., are invited to be present. By request of the Committee.

The National Convention.

The North American Bee-Keepers' Society will hold their 13th annual meeting at Washington Park Hall, Cincinnati, O., across Washington Park from the Exposition building. Time, Oct. 3rd to 5th, 1882. First session Tuesday, 10 a. m., Oct. 3. We are encouraged to hope that this will be a very profitable meeting, as we are promised papers from, and the presence of, a large number of our most prominent bee-keepers both in the United States and Canada, and essays and implements of the apiary are expected from abroad to add to the knowledge imparted by the research and inventive skill and methods of our countrymen.

EHRICK PARMLY, *Sec.*

New York, July 12, 1882.

☞ The Union Bee-Keepers' Association of Maryland, Virginia and West Virginia, will meet at Hagerstown, in the room of the County Commissioners, at the Court House, on Wednesday, Oct. 18, 1882, at 1 o'clock, p. m., the session to last two days. The Washington County Fair will then be in progress, which will give persons an opportunity to attend the exhibition. All persons intending to go will please drop me a card, so that I may secure for them half-fare rates.

J. LUTHER BOWERS, *Sec.*

Berryville, Va.

☞ The fifth annual meeting of the Northern Michigan Bee-Keepers' Convention will be held at Pewamo, Ionia County, Mich., on the second Tuesday and Wednesday (10th and 11th) of October, 1882. Pewamo being on the D. & M. and H. & M. R. R., it will be accessible by rail. The members will do all in their power to make the meeting interesting.

H. M. ROOP, *Pres.*
O. R. GOODNO, *Sec.*

Local Convention Directory.

1882. *Time and Place of Meeting.*

Sept. 26—Eastern Mich., at Detroit, Mich.
A. B. Weed, Sec., Detroit, Mich.
26, 27—Kentucky State, at Louisville, Ky.
W. Williamson, Sec., Lexington, Ky.
28—Norfolk, Ont., at Waterford, Ont.
Elias Clouse, Sec.
Oct. 3-6—North American, at Cincinnati, O.
Dr. Ehrick Parmly, Sec., New York City.
5—Kentucky Union, at Shelbyville, Ky.
G. W. Demaree, Sec., Christiansburg, Ky.
10, 11—Northern Michigan, at Pewamo, Mich.
O. R. Goodno, Sec., Carson City, Mich.
17, 18—Northwestern, at Chicago, Ill.
C. C. Coffinberry, Sec., Chicago, Ill.
Tuscarawas Valley, at Newcomerstown, O.
J. A. Bucklew, Sec., Clarks, O.
Nov. 1—New Jersey & Eastern, at New Brunswick.
J. Hasbrouck, Sec., Bound Brook, N. J.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

A Sample Copy of the Weekly BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

SELECTIONS FROM OUR LETTER BOX

Moving Bees.—It has been a very poor summer for bees, they came through the winter in good shape, but the weather we had in May and June left them in bad shape for the honey harvest. I had to feed every week up to July 5th, to keep them from starving. No box honey until August. I run my bees for increase this summer, and have Italianized all of them. I increased by the nucleus plan; had 12 colonies to begin with, and have now 32, good and strong, which have honey enough for winter; had 4 colonies make 200 lbs. of box honey. I live about ½ mile from where I am going to winter my bees—shall I leave them where they are now until I put them in the cellar, or shall I move them a week or two before they are to be put in the cellar, so as to give them a chance to fly? If I should move them would they come back to the old stand and die; or if I should wait and move them on a wagon or sleigh, and put them in the cellar without having a flight, would it not cause them to have the dysentery?

CHARLIE W. BRADISH.

Glendale, N. Y., Sept. 11, 1882.

[Move them before it is too late for a flight, then slant a board in front of each hive, so as to partially obstruct the ingress and egress; this will cause the bees to mark their location anew, and your loss will be very trifling. It would be hazardous to move them, any distance, or at all, and place them at once in winter quarters.—ED.]

Building Up.—I have a strong 2-frame nucleus—can I safely winter them, or can I build up by giving comb foundation? WM. ROBERTS.

Vaughansville, O.

[It is now too late to think of building them up much. With a strong two-frame nucleus, the most you could safely count upon would be to have one sheet of foundation drawn out into perfect comb. If you have other colonies, better give a frame of brood from each of those till you have about seven frames of brood and honey. If you cannot do this, then prepare your nucleus and put it in the cellar soon as cool weather comes. It may possibly winter safely, but the probabilities are against it.—ED.]

Still Gathering Honey.—Our bees have abundant supplies for winter, and are still gathering honey. We have removed most of the boxes and given them combs to fill for spring feeding. I hope to be able to attend the Northwestern Convention.

A. J. HATFIELD.

New Carlisle, Ind., Sept. 13, 1882.

Much More to Learn.—I commenced this year as an amateur apiculturist, with 3 colonies in box hives. I now have 8, and 4 swarms I failed to hive. I have read Quinby's and Prof. Cook's works some 3 or 4 times, also the BEE JOURNAL, and still find that what I do not know about bees would make a volume of 600 or 800 pages largely illustrated. I have only the box hive. My bees are gathering honey moderately—some largely, about half of them have filled surplus boxes once, and one colony, a June swarm of this year, has yielded 3 crops, about 45 lbs. Others have given no surplus, but they hang outside, and have more or less for months, in some instances with room inside. They have made comb outside and under the stand. Why is this? Again, Prof. Cook and Quinby lead us to suppose that the bees will make straight comb on the frames, in the frame hives; yet, in your paper to-day, J. M. Foote, of Creston, Iowa, complains of crooked combs in a Langstroth hive. I fear there is much to be learned not down in the books. THOS. MARTIN.

Coal Valley, Ill., Sept. 13, 1882.

[The idling and building comb outside was most likely the result of being honey-bound in the hive; it is possible, however, they were infested with moths, which sometimes cause a repugnance to inside work. Had you been using movable frame hives, you could easily have determined the trouble, and applied the remedy. We do not think Prof. Cook or Quinby intended to convey the impression that movable frames were a guarantee of straight combs; but with the V shaped top-bars for the movable frames, there is a great probability of straight combs, much more so than with flat top-bars, and greatly more so than with no frames to guide them, and only a couple of sticks crossed to give them a start in building. Try a movable frame hive next season, and give yourself an opportunity to be converted to their use, also to reduce the number of pages and illustrations in the large book which you *could* get up with your box hive experience.—ED.]

An Amateur's Success.—For the encouragement of beginners in the bee business, I make a statement of what I have done with 3 colonies this summer, and have only given them but a very little of my time on account of my practice; didn't do anything with them until late in the spring, and did not feed a single ounce of anything. I used comb foundation; the 3 colonies were in plain hives, with only 8 frames about the size of the American, with room for 16 frames if needed. By dividing and saving queen cells I have increased to 24, only one of them being a natural swarm and very large, which left for parts unknown. I might have increased a half dozen more, as I have plenty of honey, most of the hives containing 10 and 12 frames that are well filled. There was no honey here to work on until the 8th of July, and we have had all we could eat on the table, and there is a fair prospect for quite a surplus of fall crop. This I think is quite good for the little time they received. Of course some will say I am an old hand at the business; yes, I am, and, like James Heddon, I have the leather-colored Italians. I expect to increase to 100 next year, if I do not lose any this winter. I like to pack with chaff for winter, with as little upward ventilation as possible, with frames about 1 foot inside measure. I prefer my frames the longest way up and down, I think it the best for extracting or for boxes at the sides and top if I wish. There are nothing but Italians in this vicinity.

DR. J. S. MCALLISTER.
Columbus, Neb., Sept. 13, 1882.

Robbing.—Will bees continue to work while being robbed? Please answer in BEE JOURNAL.

H. J. NORTHRUP.
Lauringburgh, N. Y.

[No; unless the colony is strong enough to guard itself against the intruders, and gather honey at the same time.—ED.]

Harmless Moth.—I send you by to-day's mail a large miller, which I wish you would describe in the BEE JOURNAL, if not too much trouble. It was found on the alighting board of one of my bee hives. What was it there after? J. W. GILBERT.
Palmyra, N. Y., Aug. 11, 1882.

[This moth is one of our most common and beautiful sphinx moths. Deilaphila lineata. It is a fine brown moth, beautifully lined with white, black, yellow and red. The larvæ is also handsome, and feeds on the purslane. I do not know what it was about the hives for, without it was guided by curiosity—surely it had no sinister purpose, as it is very common here, and never, so far as I have noticed, has it ever peeped into a bee-hive. These moths, as are all of the Sphingidæ, are lovers of sweets, and possibly might have a honey tooth; yet their size would debar them from gratifying any such taste, as they could not enter a hive.—A. J. COOK.]

On the Jump.—I was taken sick the 16th of June, and was very ill for 8 weeks, so now that I have regained my health, I am very busy. I have the care of 150 colonies, divided into 7 apiaries from 9 to 20 miles distant from my home, and it keeps me on the jump. The honey crop is about one-third of what it should be. No basswood and very little sumac, from the effects of dry weather.

H. L. JEFFREY.
Woodbury, Conn., Sept. 13, 1882.

Feeding for Winter.—I commenced to keep bees this spring, having purchased 4 colonies of Italians. I have attended to them as well as I could, having had no experience and being guided solely by Cook's Manual, and the information contained in the BEE JOURNAL. The bees have increased very well, so that I have 9 colonies, and they are all full of bees and brood; but what puzzles me is, that there is no honey in any of the combs. I cannot see a single frame with capped honey and I have taken none from them. I am afraid that there will not be enough to keep them over winter, as the season is now pretty well advanced. Should I commence feeding now, or wait till later? There seems to be plenty of food for them, as the flowers are blooming and everything looks favorable for gathering honey. I am afraid that if I defer feeding till cold weather, they will not take it.

Hanover, Ont. NOVICE.

[Better commence feeding soon, and give them sufficient that two or three days will enable you, when cool weather comes, to give all they will still need. In a northern latitude frost is liable to come with the first clear weather; besides, the food will be much better, and the bees much more contented if they can get most of their winter stores properly ripened and capped before cold nights are permanently on.—ED.]

Doing Well on Fall Bloom.—I like to hear, through the BEE JOURNAL, from those keeping bees, and will give my experience with them; I am but a beginner. I bought an Italian queen and introduced her into a colony of black bees in June, 1880; increased to 4 colonies by natural swarming in 1881, and obtained 75 pounds of box honey. My bees were strong and hives full of honey for winter. I wintered on the summer stands, and all came out in good condition last spring. I have increased by natural swarming to 11 colonies, all in fine condition. One fine swarm absconded to the woods, and I returned 6 or 8 to the hives they issued from, as I was working for honey and not increase. The 11 colonies have given me about 500 pounds of comb honey. I do not extract, as I want honey for house use only, and prefer it in the comb. I use a side opening, movable frame hive, 14x13½ inches, and 12½ inches deep, 9 frames, with upper story for surplus honey. Can use either boxes or frames for surplus. I have never used sections, as I do not expect to sell honey. Locust was a failure with us, the bloom being killed by late frosts; white clover did not give a good yield on account of too much rain in the fore part of the season; basswood was almost a failure, but the 1st of August we had some good rains that gave us an abundance of honey bloom, and as bees had bred up well on white clover, they have given us a good surplus. If the weather continues favorable, we will get a good yield for the season. This season has been better than the last for honey. My bees are good workers, but are inclined to swarm too much, which gives me some trouble. JOHN ERWIN.
Louisville, Ill., Sept. 13, 1882.

Floral Specimens.—I send you to-day two specimens of honey plants, for names, on which bees are working now. No. 1, the large yellow flower, is found in great quantities along the mountain streams and valleys where soil is wet; it grows about 5 feet high, bears 6 to 20 flowers on each plant; stands very thick on the ground, making the valley look yellow, when in bloom, begins blooming about Aug. 1st, just as the cranesbill begins to shed its blossoms, and continues to bloom till frost. Bees, insects and bumble bees cover these flowers from morning till night in great quantities, and in the evening after 4 p.m. hundreds of bumble bees may be seen sticking to them, in a stupefied condition unable to fly, and consequently perish of cold, the elevation here being 8,000 feet above the sea. No. 2, the pink flower, begins blooming about August 20th, and blooms till frost. The plant attains a height of 3 feet, and the flowers are found along about one foot of the stem; grows anywhere in moist soil, and is very abundant. Bees are just beginning to work on it here. Both these plants, like the cranesbill, are found anywhere from the foothills to the snow, thus spreading over territory whose elevation is from 5,000 to 11,000 feet, which accounts for the long season of bloom.

PHIL. REARDEN.
Jamestown, Col., Aug. 28, 1882.

[No. 1 is known as *Rudbeckia laciniata* by botanists, and is sometimes included in the somewhat large list of sunflowers by the unscientific. It is a vigorous species, preferring damp or wet soils, and occurs throughout Canada, and the Northern States. The "compound" flower is large and conspicuous, its yellow rays often two inches long, spreading horizontally or drooping. These marginal flowers of the head produce neither stamens nor pistils, hence no seed; their whole duty is to perform the function of an advertisement or sign; but the numerous inconspicuous florets of the central part of the head are perfect in their parts, and when properly fertilized set an abundance of seed. These, too, are rich in pollen and nectar, readily accessible to bees. Curiously enough, insect aid is almost imperative in the process of fertilization, or more properly pollenization, for though each little, tubular flower sends up its pistil through a close ring of the five united anthers (pollen-sacks) when the latter are bursting and exposing the pollen in profusion, not a grain of this reaches the stigma at the time. When the pistil has pushed itself through the dusty mass, more or less of which adheres to its sides, it, rising well above, separates into two lobes each of which curls outward so that the surfaces previously applied closely to each other become exposed. It is only on these latter surfaces that the pollen can germinate, and thus fertilize the flower; but they are the very parts not smeared with pollen as the pistil pushes up through the mass. Probably by swinging with the wind and brushing against other objects, many flowers might be fertilized without insects, but the pollen-grains are too rough to be easily blown away from their place of contact or scattered by the wind. Certainly, nectar-loving insects do good service to the plant, and for these the flaming signs are hung out.

No. 2. *Epilobium angustifolium.* This splendid, violet-purple flower is of a noble race, to which belongs the evening primrose, and those glories of the green-house, the fuchsias. In them all the ovary is situated below the showy part of the flower, and in this case the latter seems perched on the upper end of a pod which rapidly develops, and ultimately gains a length of five or more inches, filled with very numerous seeds and a quantity of silky fibers (coma) like the milkweeds. The plant is found throughout the Northern States, and reaches into Artic America, but is at home only on certain soils and under certain conditions, hence the distribution is far from uniform. I cannot state what value the species has for honey producing. Medicinally, it has latterly gained some repute.—T. J. BURRILL.]

Hooks for Tops of Frames.—Last winter I brought safely through 37 out of 39 colonies; united down to 30 strong ones to begin the season's work. Took over 1,000 lbs. nice honey, about half comb and half extracted; increased to 46, and will winter a dozen nuclei, besides requeening most of my apiary. I wish to say to Mr. C. H. Deane, that I am using a much better substitute for the holes for wires in the frame, than his hooks, and cheaper by far. It is simply the tin tack used for tacking in window glass, similar to tin points used for glassing sections. Drive nearly down and then bend it over to form the head of the tack, and being broadest at the top, the wires will not slip off; or, better still, have a steel tool made to cut the tin triangular and cut your own tacks long enough to go through the top and bottom-bars and clinch on the other side. If any one has a better substitute for pierced frames let us have it. I object to Mr. Deane's hook, because its peculiar construction must make it expensive.

Barnesville, O. J. G. STEER.

Still Swarming. — And yet they come; another swarm to-day, and two on August 29th; 16 now from 6 in the spring. I am getting more bees than honey this season; but they seem to be doing well now, as fall bloom is very plenty. There is a yellow flower growing here very plenty along Eel river, that bees are working on from morning until night. It seems to be the favorite flower. From the description that Dr. Tinker gives of the golden honey plant I think it the same. I send you a sample.

H. C. WHITLOW.

North Manchester, Ind., Sept. 8.

[It is undoubtedly the same.—ED.]

Botanical. — Please name accompanying flowers. No. 1 grows upon low land, and has yellow blossoms; Nos. 2 and 3 grow upon medium low and high land, the first with violet tinted, and the last with white blossom.

DANIEL WHITMER.

South Bend, Ind.

[No. 1 is a solidago; No. 2, motherwort; No. 3, white aster.—ED.]

Late Clover Bloom.—Our bees are yet hard at work. White clover is still in abundant bloom, as well as all kinds of fall flowers. I began in the spring with 4 colonies, and none of them very heavy, I have increased them to 10 strong colonies, and have taken 224 lbs. of extracted and 134 lbs. of comb honey, in 2-lb. sections, and will still have several pounds of comb to take off, which will make over 90 lbs. per colony. My increase has been entirely by division, by taking from one to three frames from a hive at a time, and putting empty combs or frames in their place. I believe this portion of Iowa is going to be hard to beat for a bee country, for we have a good white clover district that is generally in bloom for weeks, besides other bloom in the fall.

J. W. SANDERS.

Le Grand, Iowa, Sept. 8, 1882.

Done Well.—My bees have done well this summer. I started with 3 colonies, increased to 12, have taken 300 lbs. of extracted and 50 lbs. of comb honey in sections. Sold all my extracted honey for 15c. per pound at home, and could sell lots more if I had it. E. L. FREDENBURG.

Fentonville, Mich., Sept. 9, 1882.

To Clean Moth out of Combs.—Take all the web out of the comb in the frames, then place the comb in a tub of water, filling each cell with water and leaving the comb in the water about four hours. In two days after placing the frame in the hive, they will commence to fill the comb with honey again. WINFIELD ROMMEL.

Metuchen, N. J.

Value of "Bees and Honey." — Father bought a colony of bees last winter in a Simplicity hive. The spring and summer has been so wet that the bees did not do much. The first swarm came out Aug. 10th, the second Aug. 12th and the third the 13th. I returned the third swarm, but they came out again the next day, so I put them in a new hive. They are all doing well and getting in good condition for winter. We now have hot days and cool nights. 1. Will it pay to buy a honey extractor for 4 colonies? 2. Do you think it a good plan to clip the queen's wing? 3. What is the color of a pure Italian queen? I learned what little I know out of "Bees and Honey." I think it worth twice its cost. HERBERT H. FISH.

Spencer, Iowa, Sept. 11, 1882.

[1. It will not, unless you expect to increase next season.

2. Yes; as it does not injure the queen if properly done, and it is a great safe-guard against losing swarms.

3. They vary. Some are a very pretty gold yellow, with only the tip of the abdomen black, while others are a leather-colored yellow, and the segments of the abdomen are black, with a black tip to the abdomen.—ED.]

When Shall I Feed.—I have taken from my bees a very nice surplus of extracted honey, but they have stored none in the brood-chamber. I will be compelled to feed during the winter. Would you advise feeding now, or wait until later in the season? The brood-chambers are full of capped brood, larvæ and eggs, and if I feed now, the food will become scattered in all parts of the hive. How would it do to wait until about the 1st of Oct., then remove a few of the brood combs, close up with division boards, and feed all at once? W. T. CLARY.

Clarysville, Ky., Sept. 7, 1882.

[Take off the upper or surplus story, if not already done, and feed now; a change in the weather is liable to take place at any moment. Even though scattered in the hive, the bees will bring it together as the young bees emerge from the cells.—ED.]

Inferior Honey.—This has been a very bad season so far. All of the earlier honey is dark and of an inferior quality. The later honey is good, and sells readily at 15 cts. per lb. for extracted, and 20 cts. for comb honey, and can be retailed for higher figures. N. H. ROWLAND.

Troy, Ky., Sept. 13, 1882.

Toads and Bees.—Nothing can be truer and more to the point, than the extract from the *Canadian Farmer*, given on page 547 of your invaluable Weekly. Some years ago, my bee-house being in a locality where toads abounded, my attention was drawn to the "preying" attitude described,

and taken up by the creatures every night. To test the matter, I put a bullet through several, and immediately cut them open. The average number of undigested bees found in each one's stomach was 36 to 40. I took special note of quantity, and never after allowed a hive to set right on the ground. ARTHUR TODD.
Philadelphia, Pa.

Nuclei Storing Surplus.—In passing from Lasalle to Mendota, Ill., I observed bees kept on but one farm, and those were kept on the old plan. The country is an ocean of flowers, and tons of honey were going to waste for want of bees to gather it. My bees are bringing in honey very fast, and are still swarming now and then. The weather is most promising for an immense fall crop. Small nuclei, which I did not expect would gather enough for winter stores, are now working in surplus boxes and sections. H. S. HACKMAN.
Peru, Ill., Sept. 10, 1882.

About an Average Season. — The season here for bees has been about an average one. Spring was backward, but when it did open the white clover held on remarkably well; and linden lasted well, but did not blossom very full. Have 100 colonies in fine shape for winter. C. A. GRAVES.
Birmingham, O., Sept. 12, 1882.

Good Fall Honey Crop. — My bees done well this summer. White clover came out on the 20th of June, which month was cold and wet. Three weeks in July were very good, with plenty of clover honey. There were 10 or 12 days of rain in August; the rest of the time up to this date has been very good, with sweet clover, buckwheat and goldenrod, and honey in plenty of them. JOS. LEE.
Farmers', Mich., Sept. 11, 1882.

Bees Booming Yet.—Bees are booming yet. If the present honey flow continues till October 1st, I shall harvest about 10,000 lbs. of comb and extracted honey. E. T. FLANAGAN.
Belleville, Ill., Sept. 13, 1882.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones to procure at the start.

◆

☞ We will supply sample copies of the BEE JOURNAL and large colored posters to any who may make a display at the coming fairs, to aid in getting up clubs.

Oldest Bee Paper in America
THE AMERICAN BEE JOURNAL
Established in 1861

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◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club:

or a Club of **2**,—a copy of "Bees and Honey."
" " **3**,—an Emerson Binder for 1882.
" " **4**,—Apiary Register for 50 Colonies, or Cook's (Bee) Manual, paper.
" " **5**,— " " cloth.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Or they may deduct 10 per cent in cash for their labor in getting up the club.

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☞ Binders cannot be sent to Canada by mail—the International law will not permit anything but samples of merchandise weighing less than 8 oz.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., September 18, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.
BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good. 17@22c.
AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 16@20c. on arrival; extracted, 7@10c. BEESWAX—Firm at 20@25c. per lb. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb honey is steady at 18@20c. Some extra nice 1 lb. packages have sold at 22c. No demand for dark combs. Extracted honey in kegs, barrels and casks, 9@10c. Demand better than for months past.
BEESWAX—25c. for prime yellow; dark 18@22c.
R. A. BURNETT, 165 South Water St.

CLEVELAND.

HONEY—Still selling at 21@22c. per lb. for best white 1 lb. sections; 2 lb. sections, 20c.; second grade, 18@19c. Extracted has taken a little start, and 60 lb. cans as well as 5 lb. tin pails sold at 14c. Sales of honey have been quite light the past week or two, owing to the good supply of fine home-grown peaches.
BEESWAX—Scarce at 25@28c.
A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—About 3,000 lbs. (52 cases) Hale's extra white comb was placed this week at 20c. There is no better honey in the State, and the brand enjoys an enviable reputation. Medium quality extracted in cases is firm at 8@8½c. The inquiry is good. In a retail way 10c. is asked for some extra white extracted. BEESWAX—28@30c.
STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Sold more freely, but at lower prices: Comb at 18¼c., strained at 7@7½c., and extracted (in cans) at 8½c.; choice in smaller quantities brings higher figures.
BEESWAX—Sold fairly at 27c. for prime.
R. C. GREER & CO., 117 N. Main Street.

NEW YORK.

HONEY—No quotations reported.—ED.
BEESWAX—The supply is moderate and prices held about steady, though very little doing. Western, pure, 27@27¼c; Southern, pure, 28@28½c.
D. W. QUINBY, 105 Park Place

BOSTON.

HONEY—Market active. We quote ½ lb. combs 30c. per lb.; 1 lb. combs 22@25c.; 2 lb. combs 20@22c. Extracted, in half bbls., 12@14c.
BEESWAX—Prime quality, 25c.
CROCKER & BLAKE, 57 Chatham Street.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞ We will send sample copies of the BEE JOURNAL to any one who will distribute them to bee men at Fairs. We will also send some large colored posters to enable them to get up clubs. Write to us and say how many copies you wish and we will send them post paid. See our premiums for clubs on another page.

◆

☞ The Amerian Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

Paid orders are filed in the Treasurer's office, and always accessible for reference, and the remitter gets a receipt for money sent.

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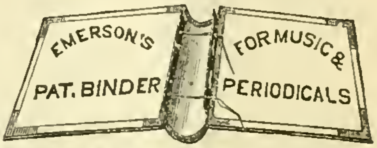

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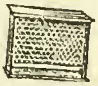

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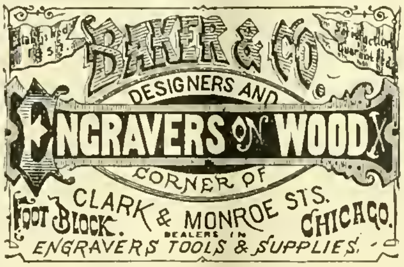

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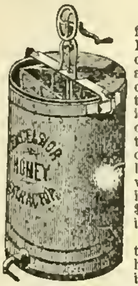

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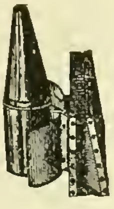

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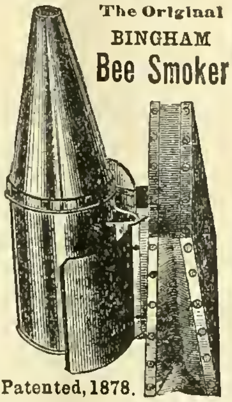

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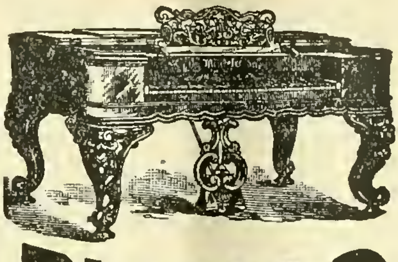

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TOPICS PRESENTED THIS WEEK.

Editorial—

The National Convention.......................... 609
MONTHLY BEE JOURNAL FOR 1883........ 609
A Test for Honey.......................... 609
Bee and Honey Show in Florida 610
Wintering Bees....................................... 610
Yellow Melilot or Sweet Clover 611

Among Our Exchanges—

Food for Queen Cages.............................. 611
Does the Queen Lead the Swarm?......... 611
Glucose from Rags.................................... 611
The Harvests of the World...................... 611
Preparing Bees for Winter....................... 611
Peculiarities of Bees........................ .. 611
The Honey Harvest in Switzerland........ 611

Correspondence—

Wintering, the Season in England, etc.... 612
Jottings on California Bee Topics........... 612
Modern Breeding and Longevity 613
Two Queens in One Hive................ ... 613
Blister Beetle Larvæ Attacking Bees...... 614
Checking the Swarming Fever................ 619

Convention Notes—

Local Convention Directory.................... 615
Louisiana State Convention.................... 615
Swiss Bee-Keepers' Convention............ 615
The National Convention........................ 617
Convention Notices.................................. 617

Selections from Our Letter Box—

Saving Combs 617
Poisoned 617
Sweet Clover 618
Moving Bees... 618
September Swarm Doing Well 618
Cultivation of Sweet Clover.................... 618
Five Hundred Per Cent........................... 618
Honey-Bound 618
Bee Lice 619
Protracted Drouth.................................... 619
Sugar Syrup for Wintering...................... 619
Honey Mulberry 619
A Partial Report.. 619
Solidago 619
Amber Syrup for Wintering 619
Not so Bad 620
Good Fall Honey Crop............................. 620
Bees in Canada... 620
The Jackson, Mich., Fair.......................... 620
Beaver County, Pa.................................... 620
A Ton of Honey.. 620
Satisfied... 620

The National Convention.

Before our next issue, the National Convention will convene. We hope all who can do so will attend, and trust that the meeting will be very interesting, and, as heretofore, entirely harmonious. We regret not being able to be present, but shall have a representative of the Bee Journal there, to take a report of the proceedings for publication.

Those who have found fault with the former meetings of this Society, should by all means attend this one, and by their counsel and assistance, aid in making it as near perfection as possible. Those who do not attend have no reason to find fault with what is done—let them go, and see to it that no stone is left unturned which could make it more interesting and useful to the bee-keeping fraternity of the whole country.

As to the next place of meeting—the Northwestern Bee-Keepers' Association at its last session in Chicago invited the National to meet with it in joint assembly, and this we think would be hailed with delight by hundreds, but some may think otherwise. New York, Indianapolis, St. Louis, Toronto, Cleveland, Peoria, and other cities have been suggested. Let the matter be well canvassed, and the most suitable place selected—so that all may be satisfied, and the bee-keeping industry be best subserved.

The Bee Journal does not desire to make any suggestion as to the location of the next Convention. It will be well satisfied with any that may be selected—feeling assured that the united wisdom of those in attendance will be sure to make a good selection. No matter where it may be held, the Bee Journal will do all in its power to advance its interest, and we shall attend if it be held at any other time than the first week in October.

In our next issue we shall give such of the essays to be read at the Convention as we can procure, and copies of them will be distributed there, so as to overcome some of the objections heretofore urged against their use. By this means those present will be able to read them over in advance, or note points as they are being read, for further discussion, and thus add largely to their usefulness.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly Bee Journal, we shall next year print a Monthly in this form and size, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly is now permanently established, and will be continued as heretofore.

The Weekly and Monthly Bee Journals will be distinct papers, each having its own sphere of operation and different readers.

We shall aim to make the Monthly Bee Journal a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

A Test for Honey.

Prof. T. Maher, of this city, sent us the following letter:

In the pamphlet on "Food Adulteration," page 53, Prof. Kedzie observes very truly: "Not only will sugar thus combine with lime, oxide of lead, oxide of iron, etc., but it will associate with itself sulphuric acid, and form a compound acid which comports itself very differently from simple sulphuric acid. This sucro-sulphuric acid forms a pretty large class of salts which are soluble in water, but especially soluble in solutions of sugar. Re-agents which will readily precipitate sulphuric acid and sulphates, *e. g.*, chloride of barium, will not precipitate the sucro-sulphates.

"Glucose has the same power as an acid substance as sucrose, forming a class of soluble glucosates. It will also associate with itself sulphuric acid, and form a class of gluco-sulphates. Undoubtedly a large part of the lime found in these starch-sugar syrups exists in the form of gluco-sulphate of lime."

I would only take exception to the sentence "chloride of barium will not precipitate the sucro-sulphates." For, with a white solution of chloride of barium added to and stirred with a diluted solution of (glucose) clear syrup at 16c. a quart, obtained this morning from the corner grocery, I have just obtained a white precipitate of sulphate of barium which sufficiently accounts for the cheapness of this syrup, when I had to pay 18c. for a quart of dark New Orleans molasses, a dilute solution of which gave no precipitate when similarly tried with a dilute solution of chloride of barium, but remained perfectly clear, as did, on another trial, a solution of extracted honey from a 3-lb. can which I bought at 161 S. Water St., and thus branded on the outside: "Pure Honey from the apiary of H. D. Burrill, Bangor, Mich."

I made a fourth trial with coffee sugar from the same grocery store, but the solution remained clear and no precipitate took place. My wife declares that she will keep this small bottle of chloride of barium solution and will not fail to try all the molasses, sugar and honey which may come into our house; let alone the syrups which will of course be severely kept out; and why cannot every well regulated family thus be provided with such a small bottle?

Chicago, Ill., Sept., 1882.

As the determination of a simple and practicable detective for adulteration in sweets is a matter of the greatest importance to bee-keepers, grocers and families, we invited Prof. Maher to conduct a few experiments at the Bee Journal office, which took place on the 20th inst.

The Professor produced a phial containing about 4 ounces of chloride of barium. "This," he remarked, "is a good article. It is necessary in all experiments of this nature that the agent used as a detective be a pure article, else the result will often be unsatisfactory; therefore, in purchasing, we must visit the druggist or chemist whose reputation is above reproach."

The first experiment was upon a so-called pure article of "golden syrup," about one ounce of which was poured in a glass, to which was added about two ounces of water. This was thoroughly mixed by stirring, after which nearly two tablespoonfuls of the liquid barium were poured in. At first a small cloud or opaque discoloration occurred, after which it resumed its original color, while the Professor remarked that it was a very good article of syrup he was testing. He said, however, that the impurities (glucose) in the syrup would be precipitated to the bottom of the glass, and would be visible when the liquid had become quiet, which proved to be the case.

Test No. 2 consisted of a tablespoonful of Davenport "grape sugar" (glucose), dissolved in four ounces of water. Into this the liquid barium was poured, when the whole mass immediately assumed a clouded appearance, and upon becoming quieted a sediment settled in the bottom of the glass, apparently as much in volume as there was originally of the glucose, and which would indicate that the majority of the glucose was insoluble in simple water.

For test No. 3 a sample of honey was used that was sent to the Bee Journal Museum by Mr. Wm. Hoge, about two years ago, which he claimed would not granulate, owing to some peculiar process by which it was treated. In this a slight effervescence took place, as though there was an acid in its composition being acted upon by soda.

Prof. Mahler was quite positive as to the efficacy of his test, and thinks chloride of barium will prove the simplest, cheapest and most delicate detective that can be used, and perfectly within the province of every man or family for all practicable purposes. Should it so prove, the Professor has well earned the gratitude of every honey producer in the country, and his experiments will result in much good.

A couple of years ago our attention was called to tincture of iron, as a ready agent for detecting adulterations in syrups and honey; but we found its use impracticable, for, while it would discolor and sometimes blacken liquid honey, it could not be relied on to give a positive indication of the presence of glucose, nor, indeed, could the proportion of honey used in a mixture of any kind be determined. Hence, we have failed to appreciate any advantage to be derived from its use, but rather misapprehension and uncertainty.

Bee and Honey Show in Florida.

Mr. W. S. Hart, New Smyrna, Fla., wrote to the State Park Association, in reference to offering Premiums for a display of honey at the State Fair, and secured an offer of a premium of $25.00 for the best display of honey in all departments of its production, and $10.00 for the second best, together with a diploma for the first prize. The following extract from Mr. Hart's letter shows his line of argument:

Our industry is well worth fostering. Here in this little hamlet of New Smyrna, we have produced over forty thousand pounds of honey of the best quality this year. Most of it produced in three apiaries. I think this amount will be nearly or quite doubled next year. This amount collected, where a few years ago all this delicious sweet was allowed to waste, shows plainly that the summer breezes sweeping over our fair State, bear away thousands of dollars' worth daily of the purest and healthiest sweet known to man. By offering liberal premiums at our State Fair, for the products of the apiary, your Aasociation will exert an immense influence toward saving this wealth to the State and at the same time help to bring within its border an intelligent and industrious class of people.

Wintering Bees.—The *Canadian Farmer* offers a prize of $10 for the best essay on "Wintering Bees in Canada. The Canadian Bee-Keepers' Association awarded it to Mr. H. Clouse, of Beeton, Ont. We shall give it in the Bee Journal soon.

The committee appointed to award the prize remarked as follows: "Regarding the essay we do not think it went sufficiently into details, but as far as it goes it shows evident care in preparing, and that the writer is a practical man."

The *Rural Canadian* adds: "It is a prize hard to award, for only the test of time can show who is the successful competitor. Many individual bee-keepers would gladly give $10 each for a sure method of wintering bees."

Yellow Melilot or Sweet Clover.

We observe on page 616 of this issue, that Mr. Ed. Bertrand, editor of the Swiss *Bulletin d'Apiculteur*, proposes to cultivate the yellow sweet clover as well as the white. It may be that in Switzerland the bees can obtain nectar from this variety, but we have never heard of its affording bee pasturage in this country. In portions of California, Texas and New York we have been informed it grows spontaneously, but the bees do not work on it. We have seen a few specimens of it growing in our locality, but always deserted by the bees. With us it blooms some two weeks sooner than *melilotus alba*, and would be quite desirable if a honey-producer.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Food for Qeeen Cages.—Speaking of the food used by Mr. I. R. Good and others in queen shipping cages, consisting of honey and sugar, the *Indiana Farmer* remarks as follows:

> We have been using this kind of candy for several years with the very best results, and have called attention to the matter several times through the *Farmer*. In the fall of 1880, in answer to some inquiries we said: "Many of our friends seem to have difficulty in making a candy for queen cages which will carry them safely for any length of time without water. We make ours as follows and have not had a single loss during the season, from this cause. We have part of a barrel of granulated honey, by digging down in the center of which, that around the sides of the barrel becomes very dry. To some of this we add sufficient of 'C' sugar to make a very stiff paste or candy. We add sugar so long as it will hold together. 'A' sugar will not do so well as the grain seems too hard and dry, and seems more inclined to run, and daub the bees."

* * *

Does the Queen Lead the Swarm?—The *British Bee Journal* says:

> There is an impression prevailing among the uninitiated that the queen of a hive leads off the swarm, but this is by no means the case with first issues, for, as a rule, the queen does not come forth from the hive until the greater part of the bees are on the wing. Another erroneous idea in existence is that the queen bee is the first to alight upon a branch or a bush, and that the bees congregate about her, but the reverse is a fact. When a swarm begins to issue, if the bee-keeper will place himself on the shady side of the hive and watch the stream of bees which pour forth like an army through a gateway, he may see the queen come out, and if inclined to prove our assertions he may capture and cage her, and put her in his pocket while he watches the proceedings of the bees. When the throng is circling in the air he may imagine that the bees are searching for her, and will, perhaps, conclude that as they cannot find her they will return at once to the hive; but no, they will first congregate near a convenient tree or bush and make a great noise sufficient to attract the attention of her majesty if she were abroad, and then they will alight and form a cluster and wait for some minutes, to give her an opportunity of joining them. If now she be taken to them, she will join the mass and all will be well; if not, the bees, after a short time, will disperse and return to the hive. Now this kind of experiment has been so often proved that it may be taken for granted when a swarm of bees has alighted and afterward returned to the hive that the queen was not able to join them, or she would assuredly have done so.

* * *

Glucose from Rags.—The *Revue Industrielle* states that a German manufactory is turning out over a ton a day of glucose made from old linen rags.

> These rags, which are composed of hard vegetable fibers, are treated with sulphuric acid which converts them into dextrine. The latter product thus obtained undergoes a washing with milk of lime, and is then treated with a fresh supply of acid stronger than the former, when the mass is at once transformed and crystallizes into glucose, of which confections, honey and jelly may be made. The process is said to be a very cheap one, and the glucose chemically identical with grape sugar.

* * *

The Harvest of the World.—From the Lendon *Times* we clip the following summary of the harvest of the World:

> As regards French wheat, the result is already known. Maize is good in 25 departments, and very good in two, as against good in seven departments only last year. Rye shows a similarly favorable contrast. Barley shows a slighter improvement. In Great Britain 414 inquiries have been sent to farmers, asking their opinion on the growing crops. The replies, taking 100 as representing an averge crop, show the following result: Wheat, 92.2; barley, 95.4; oats, 105.1; roots, 107.1; potatoes, 96.4. This may be compared with last year's figures, which were as follows: Wheat, 90; barley, 110; oats, 60; roots, 80, and potatoes, 98. The wheat crop will probably be 10,000,000 quarters for consumption, leaving 14,000,000 quarters for which we shall be dependent on foreign supply. Spain is the only country from which the reports are unfavorable.
>
> In summarizing the result, the *Times*, says: "Never, during the time since these reports were collected has the harvest in the northern hemisphere been so good all round. We usually have had to report a deficiency either in Europe or America. This year there is absolutely none. The world has an over average harvest, the year is likely to be one of cheap abundance.

* * *

Preparing Bees for Winter.—The *Indiana Farmer* gives the following:

> We should not lose sight of the fact that the most essential point in safe wintering is plenty of young bees. More can be done in the month of September to aid bees in preparing for successful wintering than can subsequently be done. The queen should be kept breeding all of this month if possible. Bees bred after this time are perhaps the only ones that survive the winter, therefore, it is of the highest importance that the queen should have plenty of room, to the end that the colony will be strong in young bees. When the season for honey gathering is over and the weather becomes cooler, bees will not rear brood, or but very little. If you have not already done so, examine each hive carefully and learn the exact condition in which it is, and if any are deficient in stores feed at once and in sufficient quantity to last them through the winter.

* * *

Peculiarities of Bees.—The *Gazette des Animaux* publishes the following about the sciology of bees:

> It appears that the monarchies of bees, well-governed as they seem to be, are afflicted nevertheless by organganized criminal classes—sneak-thief and highway robbers. Some of these robber bees go in strong bands to pillage and are able to storm and sack a hive. After the slaughter they carry all the provisions home. Some colonies of bees never work; they live entirely by robbery and murder. There are also sneak-thieves who creep unperceived into strange hives to steal honey. If successful they return afterward, with hordes of burglar bees, break open the honey-safes, and carry away the contents.

* * *

The Honey Harvest in Switzerland.—The *Bulletin d'Apiculture*, remarks as follows on the subject:

> The season of 1882 will probably be counted as a bad one by our bee-keepers. The first crop was pretty good in some of the valleys, small in others and almost nothing in the cantons of Fribourg and Soleure, as well as is in the Alpen Vaudoises. They write to us from Lausanne that their gathering is very poor, and that the swarms have been very few. We greatly fear the second crop, where they generally have one, will still be worse than that of July.

CORRESPONDENCE

For the American Bee Journal.

Wintering, the Season in England, etc.

SAMUEL SIMMINS.

While there is yet time, before the bees are prepared for their long confinement, allow me to suggest what appears to me to be the principal cause of the frequent heavy losses, which occur during the severe and protracted cold, to which some of your States are subject.

The all important and life-giving element, "fresh air," seems to have been lost sight of, and I believe that hives judiciously ventilated, without direct draught, will stand any weather, even should they have an excess of pollen, which some writers suppose to be the grand cause of wintering troubles.

Dysentery rarely occurs among my bees. Our winters are never so severe but what the bees can occasionally renew the air by their usual method of fanning; but with you the case is different, and it stands to reason that when the cold is so severe that they are unable to leave the cluster for many days in succession, the atmosphere must become foul, and, consequently, the health of the bees is materially affected, and then follows dysentery and generally the loss of the colony.

I do not mean to say that dysentery is always caused by the want of oxygen, but that its absence is the principal source of winter mortality with colonies well stored.

My idea is to give a gentle, continuous supply of fresh air, without permitting direct draught, and those intending to experiment in this direction will, of course, adopt the means most suited to their own style of hive. The season with us has been generally unfavorable; the only honey-flow occurring during the second week in August, when colonies in fair condition stored more than sufficient for winter. Previous to this the bees obtained just enough to keep the queens breeding, enabling me to increase to twice the number I had at the beginning of the year. I should have done better than this, but the weather was too windy and cool for the mating of queens; hardly one in five succeeded in meeting a drone, although I had a large number of the latter in my apiary.

I have come to the conclusion that drones are useless except for the one purpose of fertilizing queens. They consume a large quantity of honey. This year two of my strongest colonies contained not only their own drones, but, toward autumn, others from hives where they were being turned out, and when at last a few days of honey weather set in, these two made but little show, while others having no drones, were enabled to store and cap sufficient for their winter consumption. During June and July, those having an average number of drones could not seal a single cell of honey, while even weaker colonies with none, managed to keep 2 or 3 lbs. capped over.

Drones that are not required for breeding are almost a triple loss to the bee-keeper. The same space of comb which produced these idle consumers would have given a larger number of working bees, who not only get their own living, but add to the wealth of the hive.

I do not think the drones are at all instrumental in ripening the honey. What can do this more effectually than the constant circulation of air created by the peculiar fanning motion kept up by the bees? Neither do I see how it can be supposed that drones are necessary to help keep the brood warm. We know that when there is sufficient honey in the fields to entice nearly the whole working force of the hive, the brood is partially deserted only during the hottest part of the day, when no danger will occur by its being so left. It cannot be said that the presence of the drones will liberate a larger number of workers, for it must always be borne in mind that they are produced only at the expense of a much larger number of actual laborers.

Rottingdean, near Brighton, Eng.

* * *

Bee-Keepers' Exchange.

Jottings on California Bee Topics.

W. A. PRYAL.

The honey season has closed and now the wise bee-keeper is working to get his bees to fill their hives with honey for the winter requirements. No matter how good the yield may have been at the regular season, the bees will, as soon as it is over and the short drouth is lasting, empty the greater part of the cells of the sweet liquid. This spell of no honey and indoor boarding commences as a general rule toward the middle of July and continues perhaps for some weeks. During its continuance all the drones are banished from the hives, never to be replenished till the following March. In this short time too the large force of workers that remained at the close of the last honey consume fully one-half of the supplies; and as there are but few flowers of any consequence, after July the wise apiarist has to manage his bees carefully to keep them from consuming the remainder of their stores. It is true that there are some flowers to be found at all seasons of the year in this climate, but where many bees are kept no one colony can manage to lay in anything like an adequate supply of winter provisions from these flowers, unless the bloom is abundant and the flow of nectar free and plentiful as it is some years. At this time, too, the queen ceases to lay eggs except in two or three frames; the bees gradually begin to grow less. So it is important for the apiarist to be attentive to the needs of the apiary at this season. Just a little judgment will save him perhaps many a valuable colony of bees.

From five to fifteen pounds of honey will suffice to winter a colony in this climate, if the bee-keeper is only careful and watches them. A few ounces of honey fed to them at the proper time may take them through the worst part of the season, and from thence on they will be able to earn their own living.

My bees have gone through the "hard times" with the aid of a few pounds of honey, that was fed to them. The eucalyptus will soon be in bloom, and this feed with the juice they will "steal" from peach and apricot orchards, will provision them for the winter. In the middle part of February they may require a little more feeding, in fact, if they do not really require it, it is always a good plan to give them a few ounces every evening to stimulate the queen to greater exertions towards filling the combs with eggs so that a large force of bees will be ready for the first honey flow.

Orchardists in this vicinity do not complain of the bees as do their brethren in the lower part of the state. Their great annoyance is caused by birds, especially the linnets. When a fruit is once pecked by a bird, it is no longer of any account and the neighborly fruit grower would sooner have the bees get the rest of it than his arch enemy the bird.

The latest reports from the honey section of the state say that the crop will be about a fourth of a crop. Still, though the crop is light it is of good quality, and the bee-keepers have made such material advances in knowledge, etc., during the last year, that they are demanding higher prices for their honey. No more do they intend to let speculators grow fat at their expense, and we hope they will succeed in their demands.

This county (Alameda) is not noted for its bee-keeping interests; it being more of a manufacturing, commercial, agricultural and horticultural county. As far as I know I am the only individual in it who has made any success of apiculture, and then only to a limited extent. No other person has an apiary "equipped" with the modern appliances like myself. In the adjoining county, Santa Clara, on the south, there are several successful bee-keepers.

I have, during this unfavorable year, taken 46 pounds of extracted honey from my hives; this is nearly half a crop. The honey is of three grades, corresponding to the season in which it was gathered. The first is of a dark amber, and of a fine flavor, being what we call eucalyptus honey; the second lot, which was taken during the principal honey flow, is of a pale amber, and is a fine article; and the last is a little darker than the second and nearly as good. There are none of the honey sages in the woods hereabouts that they have in the south, and consequently we do not obtain any of the peculiar honey they get down there; but still our honey sells as readily as does theirs. We get five or six cents per pound more for ours than they do; not that we claim that ours is superior, but we are near a pretty thickly settled community, only a few miles from Oakland, the second city in the state, and only nine or ten miles from San Francisco. We can get a fair crop of honey any year, while lower down they cannot. We believe that just across the coast range of hills from us, in Contra Costa county, many a fine spot for an apiary may be found, and that during a season like the last, from 60 to 100 pounds of extracted honey per colony could be taken, and that 150 to 200 pounds could be obtained during a good year. When the craze for white or perfectly clear honey has somewhat died away, we will see the day when there will be as much honey raised in the northern portions of the state as there is now produced in the south. Take Shasta and adjoining counties where they have the "small" amount of 9 feet of rain every year—the lower counties hardly had 6 inches, we believe this year, say a foot anyway—(here we had only 17 inches)—the flowers grow in remarkable profusion and we have heard that bees do remarkably well there.

People in the east may begin to think that California bee-keeping is played out, but they are sadly mistaken, for it is only in its infancy. It is now only confined to a small section of the state while in a few years it will extend all over its vast surface—from Del Norte on the north to San Diego on the south and from the Sierras on the east to the sea on the west. Then when there will be a sure crop every year, the immensity of which was never known before, will the world look for its regular supply of the heavenly distilled sweetness from these shores; then will our apiarists have overcome the middlemen, and then will the industry be only second to our wine crop; and peace and happiness be the lot of every ardent keeper of God's grandest insect gift to man.

N. Temescal, Cal.

For the American Bee Journal.

Modern Breeding and Longevity.

EUGENE SECOR.

When I came to Northern Iowa, 20 years ago, a few of the early settlers kept a few "skeps" of bees. They had never heard of a Langstroth hive, nor of an Italian queen bee. The black bee was kept, either in a "log gum," as taken from the woods, or in a rough, unpainted box, made from native lumber. These men had never heard, probably, of putting bees in a cellar or cave, nor of covering them during the winter. At any rate, they did not practice it; yet they survived the rigors of those "old-fashioned winters." Not until the Italian bee, and the Langstroth hive were introduced, did we hear of such fatality among the bees. With the introduction of these came also the necessity, or at least the practice, of housing them in winter, until now, no modern bee-keeper is fool-hardy enough to leave the hives exposed to the elements while the thermometer is playing hide-and-seek among the twenties.

Many besides myself have undoubtedly asked themselves the cause of this apparent change. I say apparent change, because it may be that in those early times, when statistics relating to this industry were very meager, and bee papers almost unknown, that the losses were not noted, as they are now. And as old bee-keepers used to "take up" all late swarms with new and tender combs, and never counted them as lost, that the per cent. of colonies taken through the winter may not have been greater than now. Yet we often hear old men say that "bees didn't use to die so;" and remembering, as we do, the terrible fatality of 1881, which nearly stripped the entire North of bees, it is worth considering whether or not our modern methods of rearing and keeping bees has anything to do with our losses.

It is clear to my mind that the Langstroth hive is too shallow for out-door wintering in a cold climate. That being true, and in-door wintering, or protection of some kind a necessity, do we comply with the needs of the case as to temperature, dryness, etc.; and if neglecting these, or other essentials, do we not weaken the constitution of the race and thereby invite disease and death?

Again, the old folks didn't start with one colony in the spring and expect to have ten in the fall. Their increase was by natural swarming. Are we not straining nature a little by our methods of artificial increase? It is so easy for the novice (and some who are not novices) to divide colonies, and thereby be able to make a big report, that ambition often gets the better of his judgment, and the consequence is that his colonies are constitutionally weak, his queens short-lived, and his real increase and profits small—unless he is in the supply business, and can make his customers believe that queens reared by the forcing process are just as desirable as those reared in full colonies, in the natural way, and in the proper season.

That high breeding—that is, breeding for certain characteristics not found in the native races—is opposed to longevity is proven by the history of our own race, and by the experience and observation of breeders of thoroughbreds and high grades among our domestic animals, and I see no reason that the rule will not hold good in insect life. If we breed for beauty of form or color, or for early maturity, or any other special trait and neglect to comply with certain laws tending to other and perhaps as important characteristics, such breeding will often be at the expense of the hardiness of the race and prove in the end disastrous.

Breed for color if you like, but do not neglect better traits. If it is beauty you want, remember "handsome is that handsome does." Breed for large bees if you wish—bees that have a proboscis like a rye straw—that can suck syrup from the bottom of a molasses barrel—but in so doing do not make them so tender that we will have to raise the queen "on the bottle," nor take the workers to bed with us to nurse them through the winter.

If Vogel is correct in his theory, that the Italians are not a pure race, may not some of these losses be traced to that cause, for, if not pure, crossing with the black bee, instead of adding vigor to the latter would make them less hardy than either? For instance: my neighbors who were most unfortunate in losses in 1881, are men who have not infused any fresh blood into their apiaries for several years. My own, that stood the test better than any of them, had been improved every year by the addition of queens from abroad.

Now, the lesson which I wish to deduce from this is, that the cross of the Italians and black bees, to be beneficial, must be kept up, otherwise our bees degenerate to a condition worse than before the intermingling of the two.

The importance of thoroughbred drones is beginning to be appreciated. If a low grade bull is not fit to breed from, why is a hybrid drone, the tendency of whose offspring is to revert to the original type?

Forest City, Iowa.

Translated by A. R. Kohnke.

Two Queens in One Hive.

JOHANN FELSWANN.

"Two queens in one hive is nothing new," says one; "it has happened with me, too." Certainly, such cases are not so very rare, and will be observed by every attentive bee-keeper, and if I essay to write about it, it is not so much on account of the two queens as on account of the accompanying circumstances, under which they were observed. No practical experienced apiarist will deny the existence of two queens in one hive occasionally, but the opinions as to the "why" of it, diverge very much. To enumerate all the different opinions of bee-keepers with reference to this subject would fill many pages, the study of which would lead to the conclusion that the occurrence of two fertile queens in one hive has not yet been sufficiently explained, and will remain so until by experiment the conditions are discovered under which an otherwise normal colony will suffer two queens in their hive.

Now, as to my case: It was on an afternoon in July, the day being very clear and bright; as it had rained the preceding night, everything was refreshed and the bees improved the opportunity to gather honey from the newly opened flowers. I had one very populous colony, which, in spite of all the chances there were, did not swarm; hence, on the day spoken of above I went to investigate the case. On removing the frames, I found in the first three newly-gathered honey, the fourth was one-third honey and the rest empty cells, cleaned and polished to receive eggs, which fact led me to suppose the queen near. Very carefully I removed the frame, and there on the fifth frame, still hanging in the hive, I saw the queen in the act of laying. [In such hives the back is movable and frames are taken out one after the other from the back toward the front.—Remarks by translator]. Now, the fourth frame just removed I held still in my hands, and, as is my habit, I turned it to look at the side which had been toward the laying queen and behold, there was another queen and in the cells freshly-laid eggs. Two queens! Quite a surprise! Well, after examining the rest of the frames of brood and finding everything in the best of order, I put the frames back again in the same order they had been, with the two queens on their combs, for further observation.

The colony remained strong, had always much brood and furnished some honey, and went into winter quarters with the two queens. It wintered well; in the latter part of April I examined the colony again, but found only one queen.

The following remarkable points may be observed in this case :

1st. Both queens were in one and the same space between two combs; both in the act of laying. In all or most all cases heretofore reported, they have had their quarters in different parts, generally in extreme ends or sides of the hive.

2d. Both queens seemed to work harmoniously together for the well-being of the colony, whilst the rule is, that if they meet in one hive they fight until one is dead.

3d. A change of queens could not have been contemplated by the bees, in which case they rear another queen, because the old queen was only in her second year, and in her very best age, as proven by the condition of the colony before and after.

4th. Even suppose the bees meant to rear a queen, to either supersede the old one or swarm, then why did the old queen not swarm with part of the colony?

5th. The conduct of the workers is also to be considered, which not only suffered two queens in their hive, but seemed to treat them both alike.—*From Illustrated Bienen Zeitung.*

Gleanings in Bee-Culture.

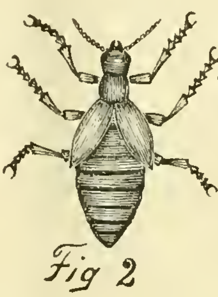
Blister-Beetle Larvæ Attacking Bees.

Inclosed I send a few insects that infest the bees about this time of the year. I have found as many as seven on one bee, but mostly not more than one. I have never found them on queens or drones, and have therefore concluded that they come from the flowers when the bees are at work, though I have never found any on the flowers, after diligent search. If you can inform me in regard to them, you will greatly oblige.

J. P. M. RAINBOW.

Fall Brook, Cal., May 1, 1882.

The insects (Fig. 1) from J. P. M. Rainbow, Fall Brook, Cal., are the larvæ of some species of blister beetle, possibly of *Meloe barbarus, Lec.*, which is a common species in California. These blister beetles are quite curious and interesting. The famous Spanish fly, which is comercially of so much importance, and which, when dried, forms the cantharides of the shops, belongs to this family. We have several species of these blister beetles, all of which are as capable of producing blisters as are the green flies of Spain. Some of our species are very destructive, and when common do great damage. The old potatoe beetle, *Epicauta vitatta*, used to be much dreaded in Ohio. I have seen our asters fairly covered with *E. atrata*, which is equally destructive to rape. These beetles have very soft bodies and long necks. Some of the species, those of the genera *Meloe* (Fig. 2), and *Hornia*, have very short wings. I often receive specimens of *Meloe angusticollis*, which is common in all of the Northern States, and is readily distinguished, especially if a female, by the very short wings and the enormous abdomen, which fairly drags with its weight of eggs.



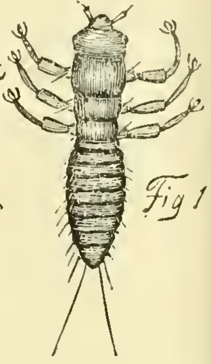


FIG. 1.—Triungulin, or first larva, the one carried by the bee to the hive. Length, 2 m. m.

FIG. 2.—Meloe, female, showing short elytra, or wing-covers, and large abdomen.

But the strangest feature of these curious insects, and the one which more directly interests bee-keepers, is connected with the habits and transformations of the immature insects, or larvæ. These alone among beetles are, in a manner, parasitic. As Mr. Rainbow suggests, the larvæ (Fig. 1), when they escape from the eggs, thousands of which are deposited in the earth by each female, at once crawl up on some flowering plant, like the *compositæ*, and as these latter are visited by bees, the active larvæ crawl upon the legs and bodies of the bees, and so are borne off to the hives. Seven of these, as seen by Mr. R. on one bee, is a serious burden, and must often overcome the bees. But this is not all. The larvæ leave the bees in the hives, and take to an egg diet, which they vary by eating honey, jelly and pollen. In this way they become a serious injury to the bees. As neither the drones nor the queens visit the flowers, these vesicant larvæ will be found on the workers only.

The other curious feature of these insects is there anomalous transformations, which were styled by M. Fabre, hypermetamorphosis. In most insects the metamorphosis is like that of our bees. We first have the egg, then the larva, then the pupa, and last the imago, or winged insect. In these blister beetles, we have the egg, then a degraded form, the one carried by the bees from the flowers, which is known as the triungulin (Fig. 1), then the second larval form, which has nearly the same shape as before, but the legs are much shorter, and now it is feeding on eggs, and the other good things of the hive. The next larval form is called pseudopupa, as it looks some like a pupa as it rests in the mutilated skin of the previous stage. The next stage is much like the usual beetle larvæ, or grubs, and then we have the pupa, and last the imago. Surely such a long development is worthy of a long name, and why not hypermetamorphosis? Some of the larvæ feed on the eggs, etc., of some of the wild bees, and others, as shown by Prof. C. V. Riley, in a most excellent paper on these insects, feed on the eggs of the Rocky Mountain locust.

That any of the larvæ feed on the roots of grass, as stated by Harris Packard and many others, is very doubtful.

A. J. COOK.

Lansing, Mich., July, 1882.

* * *

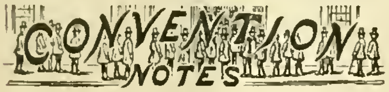
For the American Bee Journal.

Checking the Swarming Fever.

M. C. STEVENS.

Jas. N. Tucker's queries in regard to his swarm of Aug. 26th, induce me to give my practice with late swarms: 1st. Destroy every queen-cell. 2d. Return the swarm. 3d. Put on the upper story filled with sections furnished with starters. If there is any honey to be found they will go to work "with a will," and soon fill every section. This, at present prices, will be worth more than a good colony of bees. If no honey is coming in, they will be in a condition to winter with but little trouble, and without much risk; but if they are put in an empty hive, and no honey is coming in, they will have to be fed a good deal, and then, after one has done his best, the chances are slim for wintering. Besides this, the parent colony will be reduced in numbers, and in all probability the drones will all be killed off before the new queen goes forth on her bridal tour, and hence she will return to the hive a virgin and worthless. The fate of the colony is then inevitable—the bees will dwindle to nothing before spring. Bee-keepers should awake to the fact that, in most cases, it is more profitable to take proper care of a few colonies, than endeavor to get a large increase in bees, which is always at the expense of the honey product. My advice is, in no case to allow a colony to cast more than one swarm. If a second swarm comes out, put them back as directed above.

Lafayette, Ind., Sept. 14, 1882.



CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Sept. 28—Norfolk, Ont., at Waterford, Ont. Elias Clouse, Sec.
Oct. 3-6—North American, at Cincinnati, O. Dr. Ehrick Parmly, Sec., New York City.
5—Kentucky Union, at Shelbyville, Ky. G. W. Demaree, Sec., Christiansburg, Ky.
7—Marshall County, Iowa, at Marshalltown. J. W. Sanders, Sec., LeGrand, Iowa.
10—Tuscarawas Valley, at Newcomerstown, O. J. A. Bucklew, Sec., Clarks, O.
10, 11—Northern Michigan, at Pewamo, Mich. O. R. Goodno, Sec., Carson City, Mich.
17, 18—Northwestern, at Chicago, Ill. C. C. Coffinberry, Sec., Chicago, Ill.
18, 19—Southern California, at Los Angeles. J. E. Pleasants, Pres., Anaheim, Cal.
21—Northern Ohio, at Norwalk, O. S. F. Newman, Sec., Norwalk, O.
Nov. 1—New Jersey & Eastern, at New Brunswick. J. Hasbrouck, Sec., Bound Brook, N. J.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

Louisiana State Association.

The bee-keepers of St. Mary, Iberia, Vermillion, St. Landry, and St. Martin parishes met at Serrett's Hall, New Iberia, on Saturday, Sept. 2, 1882. W. R. Thompson, Esq., was elected President and J. D. Bedell, Secretary, *pro tem*.

W. R. Thompson stated the object of the meeting. Those present then proceeded to the election of officers with the following result: W. R. Thompson, President; Dr. Shaw, Vice President: Geo. E. Sonnemann, Secretary; Henry Steckler, Treasurer; E. Delmouly, Vice President for Lafayette Parish; J. D. Bedell, for St. Mary Parish; Louis Duchamp, for St. Martin's Parish; J. W. Jackson, for St. Landry Parish.

These Parishes embrace about 1,500 colonies, of which 905 are in frame hives, and the remainder are box hives and nuclei.

The next meeting will be held on Saturday, Oct. 7th, at Serrett's Hall, New Iberia, La.

W. R. Thompson, *Pres.*
G. E. Sonnemann, *Seç.*

Bulletin d'apiculteur.

Swiss Bee-Keepers' Convention.

The spring meeting of the "Societe Romande d'apiculture" was held at Fribourg, in Grenette hall on June 27th; 80 members were present; the President elect, M. A. de Dardel, congratulated the members on their having met this year in the rich center of Fribourg, already so far advanced in the culture of bees, that it has two more societies besides their own, one French and the other German, all three emulating each other in devising and adopting good methods; and, moreover, that among their own 268 members, 15 were foreigners, who showed, by joining them, the interest they feel by their work, not the least part of which is to regulate and facilitate the sale of honey; to find new markets, and throw all the light they can upon the frauds in the trade; he felt thankful with them that notwithstanding an unfavorable season of cold spells, northerly winds and rough weather of every kind, as many of them as had colonies on the plain, ready in time, had succeeded, during the few fine days at the last moment, the 11 days from the 27th of May to the 7th of June, in gathering at least an average crop; he also urged them so to co-operate with the promoters of the Swiss Exposition of apiculture at Zurich, that their own society should be well represented there in the two expositions, one of which would be permanent with "two empty specimens of each of the hives used by us, viz.: our summer hive for a colony in its highest development, and our winter hive for a colony in its most straightened condition, with all the instruments and tools used in both periods, and samples of honey and wax, classified by cartons, altitudes, times of gathering, and the plants on which the bees had fed. The other exposition, he continued, would be temporary, in September, and would receive colonies of bees of various races with hives, instruments, etc.

He was followed by Mr. L S. Fusay, who, undaunted, as he said he was, by the ghost of the tax gatherer, proposed that the following questions should be printed and sent by mail to every one of their members and others engaged in bee-keeping, to be answered in September:

1. How many hives have you, movable or permanent?
2. How many kilogrammes of honey have you gathered?
3. What proportion of clover land do you cultivate, and what is your estimate of the proportion of same land is there in your country as compared with other cultures?
4. Same question for natural meadows?
5. What is the proportion in oak land?
6. Have you linden trees and chestnut trees?
7. Have you many fruit trees, and of what kind mostly?
8. What is the prevailing wind with you in the spring, and what kind of wind is it?
9. What is your altitude above sea level (in metres)?
10. What is your harvest time for honey?
11. Is your country flat, hilly or mountainous?
12. If mountainous, which way does it incline?
13. What is the character of the soil?

Information he said, thus collected, differed, and intelligently acted upon would not only increase the production of honey, but improve its quality, and so enlarge the sale of it that he would not be any more afraid of the tax gatherer than he is now of his competitors all around him. By teaching his neighbor he has added water and power to his own mill-race.

Mr. President Horner promised the co-operation of the Fribourg Society in answering these questions, and suggested the addition of a few other questions like these: To what cause do you attribute your success or your failure? What influence has the climate on your section of country?

After a prolonged discussion on the most efficient ways and means to have the questions reach their destination, be intelligently answered, and the answer conveyed safely, a committee was appointed to carry out the measure in full.

Mr. Ed. Bertrand, editor of the *Bulletin d'Apiculteur* read a paper on the yield of honey. For a few years back he said, by means of hives permanently fastened upon scales, I have taken notes of the progress of my various crops in different locations, and I desire to communicate to you the results I have obtained, and the information to be derived from them. I have two of such colonies at some distance from my residence, and there I can take observations only when I go to visit them from time to time. At Nyon, my home, I frequently take notes every day. He said that almost invariably his crop of honey depends for weight upon the state of the weather during the 15 days preceeding May harvest. This year, at the end of March and beginning of April, the hive on the scales kept up its weight pretty evenly, the cherry trees were in blossom, then the plum trees, a few species of willows and the dandelion —after the 22d of April till the 10th of May, the weight decreased constantly, and yet the chestnut trees were blooming, the pear trees also, etc.; but the weather was rough, rainy, cold, from the north. The 11th, 12th and 13th of May show in my notes a daily increase of 350, 375 and 200 grammes corresponding to fine days and to the first flowering of the clover and the blue sage; our soil is gravelly and light. Again, from the 14th to the 20th of May, the diminution is constant, except on the 19th when the blow from the north gave place on the 20th to a southwest wind, the entire diminution from the 14th to the 20th in the evening was kilog. 1·775 (5½ pounds)! and thus on till the 16th of June when he ceased his observations to gather in his honey. I can tell that all my crop was the work of 11 days, during two of which nothing was done. In these observations I have of course sought to take into account the influence of temperature, of the atmospheric pressure, of the direction of the wind, of the weather, and my table embraces all these records—the laws are known which rule over the secretion of nectar by the plants; but we do not know every thing, and there are anomolies, and cases which cannot be explained. A certain temperature is necesary, a certain heat also, a moderate atmospheric pressure, and a certain moisture in the air, these are the general laws. The dry winds from the north and northeast are very contrary, while the moist winds from the south and west are very favorable. The rays of the sun are not indispensable; for, in cloudy weather and even during the few hours preceeding a storm, I have seen the bees gathering enormous quantities of honey. During fine weather, the gathering may be abundant, very much so, but if the days continue hot and dry, the honey decreases. After a good rain, it is abundant but watery, owing doubtless to the nocturnal evaporation; a cooling of the temperature arrests the secretion of the nectar, and yet this secretion will take place when the temperature is relatively low, in the spring for instance. Cold nights have generally an unfavorable influence upon the days which follow, and even here we sometimes get good crops after cold nights not however, below 55 to 46° Fahr.

I know that the variations in the weight of a hive do not reveal all its inside working; the laying of larvæ increases or diminishes in importance; the bees also bring in water and pollen; they build their combs; working bees are lost. It is difficult to apportion its part to everyone of these factors; and yet, take it all in all, these observations on the scales are as amusing as useful for the conduct of the apiary—often the bees appear to be gathering and yet bring in nothing; and then an importance is given to bloom, which it does not everywhere deserve in the same degree. Thus, at Nyon, I rely no longer upon fruit trees, the acacia robinier, the linden, etc. I depend on my meadows, the trefoil, the sago, and they do not disappoint me; I know that, with them, my colonies will be ready by the middle of May.

I can only speak for my locality; but I believe that the condition of many more in valleys is the same as mine. I know also, that, after hay harvest, I have nothing more to expect at Nyon; from the white clover, linden and buckwheat the bees do well. But when I shall have succeeded in getting up a field of melilot, yellow (honey lotus) as well as white, on some very poor land, I will then consider myself as a bee-keeper, almost always sure to succeed.

Commenting upon this paper, Mr. J. Jeker added that the Germans give up all idea of getting honey from their fall heath after a storm, so great is the influence exerted by electricity upon the nectar. He had also hives fixed upon scales, and, weighing a colony which had lost its queen three days after it had been hived, he found that, from that time its weight had continually decreased, while other colonies with queens were increasing in weight, the queenless one was getting lighter every day.

Another paper was read by Mr. B. de Vevey, advising beginners on their treatment of drones, not to kill them by wholesale, but to be sure to keep a few hundred for every colony, in order that the purity of the mother be well provided for, otherwise she would be very apt to get off from the hive and never return, leaving it queenless, an unproductive expense, even if a few pounds of honey are saved by an injudicious suppression of the drones which are also needed for the erection of the large cells without which bees cannot get along.

Mr. J. Jeker stated his method of dividing colonies in frame hives and recommended to beginners to make up a colony not from one hive, but from two, taking the queen and young bees from the first and the cells with larvæ from the second; experienced keepers however, he said, make up small nuclei which they furnish with cells built up in a good colony.

Mr. B. de Vevey, stated his method of dividing a colony, by choosing his strongest colony, taking out of it the cells and larvæ, without the bees, placing them in an empty hive which he carried off to fill the place of a colony that is also carried off somewhere else, and the working bees of the latter, coming back to their wonted place, find the larvæ which they care for at once to get a queen.

As he invited criticism upon his way Mr. Ed. Bertrand remarked that it was contrary to admitted theory for old working bees thus to rear a queen.

The Rev. Father Philippe, Superior of the Cordaliers, explained his method of keeping his Italian bees pure: He waits for the psychologic moment when the bees begin driving the drones before them, a sure indication that the days of these are numbered, and he divides his colonies making a choice of such as he wants to breed from; the colonies which have queens gradually exterminate their males, while those which are queenless keep theirs, and these males of choice colonies will fertilize the new queens; although it happens sometimes that the queen is badly mated and thus brings out a mongrel set of working bees, still the male progeny is pure; at the time he thus operates, the hive swarms with bees; and as he divides only after harvest, his yield of honey does not suffer. He also described the compartment box which he uses to raise and keep a certain number of queens for use when wanted. The compartments are all small hives which he can put together when not thus occupied by queens.

President Horner said that he had devised such a queens' box—a wired frame divided into 15 apartments, each holding 15 cells; but he doubts the possibility of these queens being kept after hatching.

Mr. Ed. Bertrand replied that he had no experience with such; but that in America such boxes are used, although the queens are there set free as soon as hatched—not being accepted however, by a colony, or even by by a small nucleus, unless brought in within the half hour following their birth; that after a very few days the young queens become possessed of an imperious desire to get out; and finally that it is not probable that the young queens are fed by the bees, nor know how to feed themselves.

Mr. Fusay, in trying to obtain fecundity in queens while captive, had once fitted up in the upper part of a frame cages containing royal cells; the queens, he said, could go out into a space arranged above the cage, and into this space males were introduced; but the results were null; the captive queens after 7 or 8 days, were thinned, faded, and not received if presented to nuclei.

Mr. Ed. Bertrand presented the solar wax extractor of Leandri, improved by Dr. A. Dubini, costing 10 francs; it had been sent to be examined and tried, and the wax extracted with it was declared to be very pure, not burned in the least; it could only be used for small quantities, but saved much labor. Mr. Bertrand presented also the Peet queen cage, an American device for carrying and introducing queens; now being manufactured by Mr. P. Von Siebenthal.

Mr. Marmier presented an American smoker improved by himself; between the guard and the fire place he has fitted up an old carpet to shield off the heat; within the fire-box, a spring fastened to a grate presses upon the fuel and keeps it kindled; lastly two handles fitted upon the bellows facilitates it being held more easily with one hand.

The meeting adjourned at 5:45 p.m.

Ed. Bertrand, *Secy.*

This day of June 27th was well filled up; at 7:30 in the morning a number of bee-keepers were already in attendance at Carpenters' hotel, Fribourg, Vand, Geneva, Neuchatel, the Bernese Jura were represented; the venerable Abbe Alois Ulrich, of Sion, always present at our meetings, represented the Valais; true to his promise, Mr. J. Jeker, of Lubingen, vice president of the Society of our confederate of the German tongue, was also present; the committee of the Fribourg Society was almost complete. After the introductions, hand shakings, and the exchange of news about the yield of honey, the entire company of pastors and curates, teachers and farmers, manufacturers and others, went in a body to the fine garden of the Cordeliers, situated upon a high terrace overlooking the Savine. The Rev. Father Philippe, Superior of the Convent, did the honors in a very pleasant manner. His colonies, mostly pure Italian, are located in three or four pavilions. Unfortunately the season has this year been very unfavorable in the Canton of Fribourg, and the hives contained but very little honey. A number of groups formed around the pavilions and a few competent members, among them the Father Philippe and Mr. Jeker, with a right good will, made operations and demonstrations in response to inquiries addressed to them; after which discussions and the annual meeting was held at Greneth Hall.

The National Convention.

The North American Bee-Keepers' Society will hold their 13th annual meeting at Washington Park Hall, Cincinnati, O., across Washington Park from the Exposition building. Time, Oct. 3rd to 5th, 1882. First session Tuesday, 10 a. m., Oct. 3., We are encouraged to hope that this will be a very profitable meeting, as we are promised papers from, and the presence of, a large number of our most prominent bee-keepers both in the United States and Canada, and essays and implements of the apiary are expected from abroad to add to the knowledge imparted by the research and inventive skill and methods of our countrymen.

EHRICK PARMLY, *Sec.*
New York, July 12, 1882.

☞The Northwestern Bee-Keepers' Convention will meet at Chicago, Ill., on Tuesday and Wednesday, Oct. 17 and 18, 1882. The office of the American Bee Journal has been kindly tendered as a place of meeting. A cordial invitation is extended to all bee-keepers, and especially those of the Northwestern States, to be present. The meeting takes place during the last week of the Inter-State Industrial Exposition, to enable all to obtain reduced railroad rates. First session at 10 a. m. C. C. MILLER, *Pres.*
C. C. COFFINBERRY, *Sec.*

☞The Union Bee-Keepers' Association of Maryland, Virginia and West Virginia, will meet at Hagerstown, in the room of the County Commissioners, at the Court House, on Wednesday, Oct. 18, 1882, at 1 o'clock, p. m., the session to last two days. The Washington County Fair will then be in progress, which will give persons an opportunity to attend the exhibition. All persons intending to go will please drop me a card, so that I may secure for them half-fare rates.

J. LUTHER BOWERS, *Sec.*

☞The fifth annual meeting of the Northern Michigan Bee-Keepers' Convention will be held at Pewamo, Ionia County, Mich., on the second Tuesday and Wednesday (10th and 11th) of October, 1882. Pewamo being on the D. & M. and H. & M. R. R., it will be accessible by rail. The members will do all in their power to make the meeting interesting.

H. M. ROOP, *Pres.*
O. R. GOODNO, *Sec.*

☞The Tuscarawas Valley Bee-Keepers' Association will hold their next meeting in Wilgus Hall, Newcomerstown, O., on Tuesday, Oct. 10, instead of Oct. 5th. This change is made in order to allow members to visit the National Convention at Cincinnati. J. A. BUCKLEW, *Sec.*

☞The bee-keepers of Boone Co., Ind., are cordially invited to meet at the office of Barton Higgins, in Lebanon, Oct. 9, at 9 o'clock, a.m., to complete the organization of the auxiliary County Bee-Keepers' Society. The bee-keepers of Hendricks county, Ind., are invited to be present. By request of the Committee.

☞The Marshall County, Iowa, Bee-Keepers' Association will hold its regular session at the Court House in Marshalltown on Saturday, Oct. 7, at 10 a. m. Subject for discussion, "How to prepare for wintering." We hope to have a good meeting.

J. W. SANDERS, *Sec.*

Vice President for Kansas.—Mr. D. P. Norton having peremptorily resigned, I hereby appoint Mr. S. J. Miller, of 314 Kansas avenue, Topeka, Kansas, as his successor to the Vice Presidency for Kansas of the N. A. B. K. Society.

A. J. COOK, *President.*

☞The Southern California District Bee-Keepers' Association will hold their annual Convention in Union Hall, Los Angeles City, Oct. 19, 20, 1882, during the week of the Agricultural Fair. The Convention promises to be of so much interest that no bee-keeper should miss it. Ladies are pressingly invited to attend.

J. E. PLEASANTS, *Pres.*

☞The fall meeting of the Northern Ohio Bee-Keepers' Association will be held in Whittlesey Hall, Norwalk, O., Saturday, Oct. 21, commencing at 9 a. m. A full attendance is solicited, as it will be a meeting of more than usual interest. Principal subject for discussion: "How shall we winter our bees without loss?"

S. F. NEWMAN, *Sec.*

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☞Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

SELECTIONS FROM OUR LETTER BOX

Saving Combs.—Do bees make any comb after August? I have been advised to take from each hive all frames with comb that bees cannot cover. 1. Is it wise to do so? 2. If I do, how can I preserve this comb until spring? 3. Will it injure the comb to fumigate it with sulphur to destroy worms? This is my first years' experience with bees; am much interested, but have had great trouble with worms in my weak colonies. My experience will, I trust, enable me to do better next year. JOHN H. BOSS.
Glenville, Ala., Sept. 13, 1882.

[1. It is better to remove all combs that the bees cannot cover, leaving those in the hive which are well filled with honey.

2. Put them in a cool, light room; or in a tight room where you can easily fumigate them with sulphur.

3. No; and for this purpose you can use empty hives, fitting the combs in nicely, closing all cracks, and with a good smoker charged with sulphur, fumigate them thoroughly from the entrance. If the bees do not cover all the combs, it will be no protection against moths to leave the extra combs in the hives, but rather destruction to the combs and the bees as well.—ED.]

Poisoned.—I have two August colonies of bees that have done splendid work, and two July colonies that are perfect failures. They have dwindled to a few handfuls. One colony I gave a comb with eggs and larvæ, but they failed to rear a queen. In the other I fear the queen is worthless. 1. What shall I do with both colonies to save what I have? 2. Would it be best to consolidate them both with my strong colonies? 3. What is the trouble with the bees, when a dozen at a time may be seen upon the ground reeling around as if drunken, and apparently in distress? Bees in this quarter have swarmed late, but done remarkably well. We have had no rain here since the 8th of August, and, in consequence, flowers are dried up. Please answer the above questions and oblige

A BEGINNER.
Malvern, Iowa, Sept. 18, 1882.

[1 and 2. Unite them with the stronger colonies, removing their queens first. By this process you will strengthen the already good colonies, and will sacrifice nothing in doing so, as the July colonies would probably die if left to themselves.

3. Most likely it is the result of some peculiar food which is a destructive poison, and the bees come out of the hive to suffer and die.—ED.]

Sweet Clover.—The middle of July I carefully prepared nearly two acres of land and planted buckwheat and Bokhara clover together on it. I used fully four pounds of the clover seed per acre. The buckwheat came up, but so far nothing is to be seen of the clover. The seed was sold to me by a trustworthy dealer. 1. Can you explain the cause of failure? 2. Will it likely come up yet? I am satisfied the pasturage is the great question for bee-keepers to solve, and am inclined to plant a good deal of sweet clover as well as some other plants, but this first attempt is discouraging. I had a novel experience with a young queen a few days since. I thought it time for her to begin laying and on taking out a frame, she being on it, I thought I detected in a cell near her one egg. I had to disturb the bees, they being clustered pretty thick over the spot. To my surprise she took flight. None of the bees were so much disturbed. Shortly afterwards I found her in the hive, and intending to build the nucleus into a colony, gave her another frame of bees and brood. Later in the day, wishing to be assured of her safety, I carefully examined the hive. When I first lifted out the frame on which I found her she seemed nervous and timid, but soon resumed her occupation of laying, although the noon sun was shining on her. The bees about her seemed to be quite as much interested in her work as I was. This conduct seemed singular in a timid young queen. GEO. E. BOGGS.

Clintonville, Ky., Sept. 19, 1882.

[1. We are yet in the experimental stage of cultivating sweet clover, and occasionally failure of germination is a problem we have not solved. Yours is the third case we have heard of, where the seeds failed to grow, and in the first two cases we knew the seeds to be fresh and sound. In one case, they were gathered in the vicinity of Chicago, and sowed at different times on the same kind of soil gathered from, and yet it did not grow. In both instances, however, they were sown broadcast during a spell of drouth, and, we believe, were not harrowed under. A gentleman of this city gathered some of the seed last season and sent to a friend in Nebraska, who planted it in March last and we are assured it has been in bloom for four weeks. We have planted sweet clover at almost all seasons, and in every method we could think of, and have never had it fail to grow; but had but one kind of soil to experiment upon—a low, blue clay.

2. Were the case ours, we would not despair of its growing, unless next spring fails to bring it up.

We have never had even a young Italian queen take flight from the comb; but it has been a very common occurrence with young Syrians, even to the age of six weeks. They appear quite nervous and restless when the comb is disturbed.—ED.]

Moving Bees. — 1. Will it do any damage to bees and brood to move them 60 miles by rail about the first of November, and should I cover the frames with wire-cloth or honey-board while in transit? 2. Is honey from goldenrod good for wintering bees? It has been a very poor season here for bees. W. N. HOWARD.

Lyndon, Vt., Sept. 18, 1882.

[It will do to move bees at any time, provided the weather is mild enough afterward to allow of their having a flight. So late in the season as you propose to move them would be too cold to allow of wire-cloth covering the frames. Use a honey-board over them, or a blanket over the frames and the hive cover on. It would be well to bore one-inch holes in opposite sides of the brood-chamber, and cover them with wire-cloth from the inside; this would afford ventilation enough. Never put the wire-cloth outside, where ventilation is the object desired, as the bees, when excited, will crowd into the cavity, and those behind crowd against and kill them, and thus defeat the very purpose you wish to accomplish.

2. If ripened and capped over, it is excellent winter food.—ED.]

September Swarm Doing Well.—Bees are doing well. My last swarm came out one week ago to-day. I gave them 3 frames of brood and honey, and 6 of foundation. At this date they are almost complete. From one pound of Dr. Tinker's golden honey plant seed, sowed Feb. 15th to April 15th, in best rich loam on lower foothills and bottom lands, not one stalk has appeared as yet. I have 59 good colonies of bees. ASBURY MCKNIGHT.

Bible Grove, Ill., Sept. 16, 1882.

Cultivation of Sweet Clover.—About the culture of sweet clover you remark in the BEE JOURNAL of Sept. 6th, "the natural requirements of the seed are to some extent, or nearly wholly met by planting in late winter or very early spring when the nights are still frosty and an occasional severe freeze assists to rot and burst the hull," etc. I have been experimenting with sweet clover for three years, and the only success I have had in sowing was in spring, after all danger of hard freezing had passed. Early last spring there was a bountiful growth of young plants from seed dropped by the old ones, and a hard freeze killed every plant above ground. The young plants are quite tender. I sowed an acre in drills after all freezing was over, about time of corn planting, and judging from the result, I should say that good new seed would grow as well as good seed corn, and if properly distributed, a pound is sufficient for an acre. It should be covered about an inch, and a plant to every square foot is ample. It is about the first green thing to be seen above ground in spring and is quite liable to be nipped by frosts. Its early and rank growth dwarfs and chokes out rival weeds, its rich and luxuriant foliage completely shading the ground. I have not tested it for pasture, but if stock like it and thrive upon it, it must be valuable for early pasture. Can you tell me how to save and separate catnip and hoarhound seed from the chaff to which it adheres "closer than a brother?" I consider them both excellent honey plants, especially as hoarhound blooms two to three weeks before sweet clover, and I never knew bees to desert it for something better. D. P. NORTON.

Council Grove, Kan.

[If sown in late winter, it will rarely ever sprout in time for the frost to kill it. We have sown it on the snow, and received good results. Again, were it necessary to sow in spring, it would not be so universally reproductive as it has always proven itself, growing and thriving for many years in succession if left to seed itself each summer and autumn, as has been the case in the vicinity of Chicago.

We have no information as regards saving and cleaning catnip and hoarhound seed, and quite agree with you in commending them.—ED.]

Five Hundred Per Cent.—I have just returned from the Rocky Mountains, and after viewing the magnificent and varied flora, of mountain, foothill and plain, and seeing no honey nor apiarian supplies at the great Denver Exposition, I regarded it as an outrage upon the beautiful "Centennial" State of Colorado. Our bees here are piling in the honey at a wonderful rate and I find a ready market at home for all produced. My bees have made for me this season five hundred per cent. upon their last spring's valuation. Am beginning to feel quite well acquainted with some of your correspondents from their frequent letters—and Heddon—I just naturally like him. JOS. SAUNDERS.

Reynolds, Neb., Sept. 17, 1882.

Honey Bound.—My 75 colonies of bees are all full below—no room for the queens to lay. Had I better extract two or three frames in each, and put the empty combs in the center? Some colonies have 10 frames of solid honey. H. M. MORRIS.

Rantoul, Ill., Sept. 18, 1882.

[Yes; the first favorable weather that comes. It would be much better had it been done before; but even now there is time to mature a liberal amount of brood before winter sets in, if it is attended to at once.—ED.]

Bee Lice.—I have seen such trouble as described by Wm. Glennon, on page 587 of the Bee Journal, caused by a red spider-like louse, which affects the abdomens of pupa generally, but sometimes larvæ. Get a piece of pupa brood 5x6 and examine. Sometimes large patches are infested; at other times only a cell or two in a place. H. L. Jeffrey.

Washington Depot, Conn.

[The louse to which our correspondent refers is probably *Branla cæca*, which will be found fully described in "Cook's Manual," page 268, or, perhaps, *Meloe barbarus*, a delineation of which is given in this number of the Bee Journal, on page 614. We do not think anything of this kind was the trouble with Mr. Glennon's colony. The bees were, from some cause, unable to lay in ample stores, and destroyed the defenseless to save the vigorous. The queen may have been unprolific previous to honey flow, or the bees lacked energy and industry.—Ed.]

Protracted Drouth.—I commenced the season with 20 colonies, most of them in fair condition, but 2 or 3 very light, these I soon brought up by giving them frames of capped brood from strong colonies. I always aim to get my colonies uniform as early as possible in the spring; bees did nothing in March and next to nothing in May. The season was cold, dry and backward, fruit trees blossomed the last of May and first of June, but they seemed to secrete very little honey; red raspberry and white clover yielded very little honey, I had to feed my bees with frames of honey kept over from last season, or I do not believe I should have had half a dozen colonies left alive. About the middle of July most of my colonies had not an ounce of sealed honey, and many of them it seemed had hardly enough to last them over night; but they were strong in bees and brood. The booming time finally came the last week in July and first in August. It was during sumach bloom, and lasted about ten days. Most of the time being favorable for the bees and they improved it, for during the time they filled all spare room in the brood frames, some of the outside frames they sealed solid to the bottom, and also filled 175 two-pound boxes, or 350 lbs. of box and 100 lbs. of extracted, all nice white honey, and all collected in about 10 days, besides what was stored in the brood frames, which must have been twice as much more. Since sumach has gone the bees have barely made a living, but they are at work some on goldenrod now, and bid fair to obtain ample stores for winter. I kept back swarming as much as possible by letting the swarms return when they came out. I clip all my queens' wings, and remove 2 or 3 frames of brood and replace with empty combs or foundation. These frames of brood from two or more hives I unite with bees and all, and from other colonies. After a day or two I introduce a laying queen, and they very soon make good strong colonies. My increase was from 20 to 30, with a few nuclei for queen-rearing. I do not claim to be a scientific bee-keeper, as I make it only a secondary business, farming being my principal occupation. I get 25 cents a pound for nearly all of my honey, and a good share of it is sold right at my door. We have had one of the most severe drouths this season that I ever knew. From the 19th of July to the 10th of September we had less than half an inch of rainfall, and most of the time the weather was very warm, with drying winds. Nearly all vegetation has dried up except in low, swampy places. Many animals have suffered for want of food and water, and the poor honey bee with the rest. We had a fine, welcome rain last Monday, over 2 inches of water falling, for which we feel thankful. R. Downs.

Naugatuck, Conn., Sept. 14, 1882.

Sugar Syrup for Wintering.—Some experienced bee-keepers say that white sugar syrup is equally as good as honey for wintering bees. If so, why is it not advisable to extract all the honey late in the fall, and insert empty combs in the brood department to be filled with sugar syrup by the bees for winter use? If this were done, there would not be likely to be enough pollen stored to harm the bees and the syrup would, I should think, be more economical than honey for bee feed. Has this mode been sufficiently tested to determine its feasibility? J. McKinstry.

Nelson, Ill.

[Many bee-keepers have advocated and adopted the practice of extracting closely in the fall, then feeding sugar syrup for winter stores, with very satisfactory results.—Ed.]

Honey Mulberry.—Bees are doing very well here for the last few days, but are storing but little honey in boxes, their time being principally occupied in filling empty spaces in the brood chambers, where the brood has hatched out. This has been a poor year for honey in this section. May, June, July and August is the time when bees store nearly all their surplus honey here. From the 1st of May to the 10th of June was so cold and wet bees did nothing; then came a drouth which lasted till the 10th of July, during which time nearly all the surplus honey was stored that we have taken this season. Since that time it has been too wet until the 1st of this month, and it seemed to take a week or 10 days' dry weather to renew the secretion of honey in the blossoms which had been so long and repeatedly drenched with rain. Dry weather, if not protracted too long, is most propitious for the secretion of honey, more especially in the river bottoms. As there has been a good deal said about negro bee-keepers, I can say I am acquainted with 6 or 7 negroes who are keeping bees, and own from 2 to 100 colonies, some of whom are realizing large yields of honey, and are making it quite as profitable as their white brethren who keep bees in the same style—that is, in old log and box hives. A young man who has 17 colonies at my apiary, and myself, are the only persons in all my acquaintance who keep bees in movable comb hives, but several speak of transferring next spring. I had a talk with an old bee man who lives near Longview, Tex., who told me he had the best honey plant extant. He calls it the honey mulberry, and says it grows to the usual size of the common mulberry. He promised me some sprouts from it. I would like to have your opinion of this plant as a honey producer. 1. Do you know any plant by this name? 2. Do you know of any other species of mulberry that is valuable as a honey plant? 3. Are hybrid bees more irascible than the blacks? Do virgin queens very often meet with drones whose hives are a mile away, or is it in exceptional cases? B. L. Clements.

Queen City, Tex., Sept. 17, 1882.

[1. We do not know any such shrub or tree.

2. There are two or three species of mulberry, but none especially valuable for honey, though all yield more or less.

3. If Italian queens are mated with black drones, they are much more irascible than the pure blacks; if black queens mate with Italian drones, then the traits of disposition are most likely to be reversed.

4. They do so very frequently, unless they are very numerously surrounded with drones.—Ed.]

A Partial Report.—So far I have obtained 990 lbs. from my 17 colonies spring count besides increasing to 38. They are hybrids. The season up to July 1st was cool and unfavorable but since that time there has been an abundance of bloom. I consider Alsike clover the best of honey plants. F. A. Bohl.

Summum, Ill., Sept. 16, 1882.

Solidago.—Please say what the accompanying plant is? I have never seen bees on it, but I am told they do visit it. W. P. Taylor.

Fitzroy Harbor, Ont.

[It is a solidago, to which family goldenrod also belongs. We have seen bees gathering honey from this species this fall.—Ed.]

Amber Syrup for Wintering.—Will it be safe to feed bees syrup made from early amber sugar cane, for winter use? James F. Johnson.

Salem, Mo., Sept. 17, 1882.

[We have never known of its having been tried, but doubt its utility for that purpose; however, it is worthy of a trial with one or two colonies.—Ed.]

Not So Bad.—Bees are doing very well so far this season. Have taken to date 9,191 lbs., mostly extracted; had 69 colonies in the spring. I have increased to 100. P. LOUCKS.
Kingsburgh, Cal., Sept. 9, 1882.

[Nearly 140 pounds per colony spring count, and 80 per cent. increase, is not such a disastrous failure as might have occurred. In former years anything like such a yield would have been reckoned first rate.—ED.]

Good Fall Honey Crop.—The fall honey crop is very good. Comb honey is selling readily to our grocery men at 25 cents per pound. A. J. COOK.
Lansing, Mich., Sept. 21, 1882.

Bees in Canada.—This has not been a good season for bees in Canada, the spring was so remarkably cold, they hardly got honey enough to keep themselves alive till basswood bloom. Since that time they have done well, but swarming was very late (the end of July and through August), which is very unusual. I lost some swarms, as I did not watch for them, thinking swarming time was past. I have increased my stock from 3 to 9. I am the only person in this township that I know of who keeps Italians, and only one of my young queens mated with a black drone, so that I have been fortunate in only having one colony hybridized.
HENRIETTA F. BUTLER.
Campbellford, Ont., Sept. 13, 1882.

The Jackson, Mich., Fair.—Yesterday I visited the Fair at Jackson. The apiarian exhibit was quite small, compared with the one at Toledo, and what there was had not been put up in a way to call attention. Some extracted honey in jelly cups and combs made in tumblers was about all besides the apiarian supplies. Bee-keepers have no reason to complain of not being able to sell their honey, when they make no effort to show it. Consumers of honey look at "supplies" with curiosity, but at honey with a desire to *taste* it. We should endeavor to attract the eye, gratify the desire for the beautiful, as well as to please the taste.
E. B. SOUTHWICK.
Mendon, Mich., Sept. 21, 1882.

Beaver County, Pa.—Such a season as the past has never visited this county. Heretofore we have almost always obtained more or less surplus honey. Bloom was plentiful, but appeared to secrete no nectar. The poor bees have been diligent, and on the wing from morn till night, but made no progress at all. I know of but few swarms, not over 20 besides my own; I had about 18 natural swarms, and for the life of me I cannot see what made them swarm, as they had no honey. I bought a black colony which cast a swarm; I then transferred them, and there was not a pound of honey in the hive. I cannot imagine why they swarmed. 1. What is the difference between a tested queen and a dollar queen after her progeny appears, and they possess the requisite number of bands? 2. I send you a sample flower that the bees work on from morning till night; it is a fall flower, and grows from 7 to 8 feet high. What is it?
COL. R. WALTON, *Vice Pres.*
Industry, Beaver Co., Pa.

[1. As you propound the question, there is no difference. Fairly stated, there is just as much difference as exists between a doubt and a fact.

2. The plant specimen is from Dr. Tinker's famous golden honey plant. —ED.]

A Ton of Honey.—I commenced in the spring of 1882 with 26 colonies in movable frame hives; have increased mostly on the nuclei system to 85, all good colonies now; extracted over 300 lbs. of honey from clover and basswood; have worked since for increase and comb honey. I have over a ton of honey, and what I call a fair increase, over 3 from one. I have transferred 40 colonies for neighbors, all of which have done well—thanks to Mr. Heddon for progressive transferring in the BEE JOURNAL of July 12th. I have transferred 18 colonies on that plan—it is just immense. No more combs, brood and honey, nailed, clasped, tied and smashed in frames for me. My success in increase and honey (which means money) was through the aid of the welcome BEE JOURNAL, of which I hope to be a lifelong subscriber. S. MCLEES.
May, Mich., Sept. 20th, 1882.

◆

Satisfied.—My BEE JOURNAL comes every week, freighted with items new and spicy, adapted to bee-culture. It refreshes our memory on things old and wakes us up to modern ideas. Long may its editor live to publish the BEE JOURNAL, and tell us how to manage the "blessed bees."
HENRY TILLEY.
Castle Hill, Me., Sept. 18, 1882.

◆

☞The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning County, in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th.
LEONIDAS CARSON, *Pres.*

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance:

For **4**	weeks		**10**	per cent. discount.
" **8**	"		**20**	" "
" **13**	"	(3 months)	**30**	" "
" **26**	"	(6 months)	**40**	" "
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" **52**	"	(1 year)	**60**	" "

Discount, for **1** year, in the MONTHLY alone, **25** per cent., **6** months, **10** per cent., **3** months, **5** per cent., if wholly paid in advance.

Discount, for **1** year, in the SEMI-MONTHLY alone, **40** per cent., **6** months, **20** per cent., **3** months, **10** per cent., if wholly paid in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ The Amerian Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—"Bees and Honey," in paper.
" " **3**,—an Emerson Binder, or "Bees and Honey," in cloth.
" " **4**,—Apiary Register for 50 Colonies, or Cook's Manual, paper.
" " **5**,—Cook's Manual, in cloth, or the Apiary Register for 100 Colonies.
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Two subscribers for the Monthly will count the same as one for the Weekly, when getting up clubs for the above premiums.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., September 25, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 16@20c. on arrival; extracted, 7@10c. BEESWAX—Firm at 20@25c. per lb.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—Choice white comb honey is steady at 18@20c. Some extra nice 1 lb. packages have sold at 22c. No demand for dark combs. Extracted honey in kegs, barrels and casks, 9@10c. Demand better than for months past.

BEESWAX—25c. for prime yellow; dark 18@22c.

R. A. BURNETT, 165 South Water St.

CLEVELAND.

HONEY—Sells very readily in 1 lb. sections at 21@22c. for best white, and 19@20c. for 2 lb. Second grade, 1 lb. 19@20c. Extracted is selling very slowly again, and some arrivals in bbls. we have been unable to place, asking 11@12c. Extracted in tin pails has sold slowly at 14c.

BEESWAX—25@28c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

Included in this week's receipts was one lot of 10 tons amber extracted, free from granulation, which was purchased prior to arrival. Half of it has since been resold at 8¼c., for shipment to Europe. The market is firm but rather quiet.

We quote white comb, 18@20c.; dark to good, 12@15c. Extracted, choice to extra white, 8½@9½c.; dark and candied, 7½@8c. BEESWAX—28@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Plentiful and dull. Comb lower, at 16@18c—latter for choice white clover in small packages; strained in round lots at 7c.; extracted in cans at 9@10c.

BEESWAX—Sold fairly at 27c. for prime.

R. C. GREER & Co., 117 N. Main Street.

NEW YORK.

HONEY—No quotations reported.—ED.

BEESWAX—The supply is moderate and prices held about steady, though very little doing. Western, pure, 27@27½c; Southern, pure, 28@28½c.

D. W. QUINBY, 105 Park Place

BOSTON.

HONEY—Market active. We quote ½ lb. combs 30c. per lb.; 1 lb. combs 22@25c.; 2 lb. combs 20@22c. Extracted, in half bbls., 12@14c.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

☞ We will send sample copies of the BEE JOURNAL to any one who will distribute them to bee men at Fairs. We will also send some large colored posters to enable them to get up clubs. Write to us and say how many copies you wish and we will send them post paid. See our premiums for clubs on another page.

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

☞ When changing a postoffice address. mention the *old* as well as the new address.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ Hundreds of clergymen, doctors and others have used Kendall's Spavin Cure with the best success. 37w4.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

THE BRITISH BEE JOURNAL
AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited and published by
C. N. ABBOTT, Bee-Master,
School of Apiculture, Fairlawn, Southall, London.

☞ We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 per annum.

GERMAN CARP,

For stocking ponds, Goldfish, Silver Pearl, Fringe Tails, Golden Orfes, etc. For particulars, address
MUTH & ECKARDT,
37wst Mt. Healthy, Hamilton Co., O.

ALFRED H. NEWMAN,
Dealer in all kinds of
APIARIAN SUPPLIES,
AND
HONEY AND BEESWAX,
923 West Madison Street,
CHICAGO, ILL.

MY ILLUSTRATED CATALOGUE
sent FREE upon application.

EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book.

☞ For sale at the BEE JOURNAL Office. ☜

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. *Sells at Sight*, Double your money Address Dr. Chase's Printing House, Ann Arbor, Mich
36m1yp

Queens and Bees

FOR SALE—200 Untested Italian Queens—single Queen, $1; half dozen, $5.50; per dozen, $10.00.

100 Tested Italian Queens—single Queen, $2.50; per half dozen, $13.00; per dozen, $24.

50 Colonies of Bees, in Gallup frames, cheap.

200 Colonies of Bees, in Langstroth frames in prime condition.

J. H. ROBERTSON,
36wtf Pewamo, Ionia Co., Mich.

SWEET CLOVER SEED,

This year's crop, all of the white variety, 28c. per pound; $3.75 per peck; $10.00 per bushel.

☞ I can fill no more orders for Queens this fall, having sold all I had to spare, leaving many orders unfilled, and with orders still coming in. The advertisement in the Weekly Bee Journal did it.

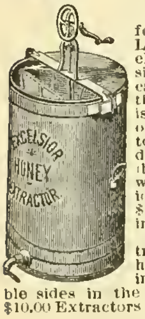
I. R. GOOD,
5w1y Nappanee, Elkhart Co., Ind.

W. Z. HUTCHINSON,
Rogersville, Genesee County, Mich.,

has no Queens for sale now, except Tested Italians at $1.50 each. But he has plenty of these, and can send them by *return mail*. 39wtf

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

EXCELSIOR HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13	inches	$8 00
For 2 Langstroth "	10x18	"	8 00
For 3 " "	10x18	"	10 00
For 4 " "	10x18	"	14 00
For 2 frames of any size,	13x20	"	12 00
For 3 " "	12½x20	"	12 00
For 4 " "	13x20	"	16 00

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen..........$4.50
2-frame Nucleus, with Tested Queen.......... 5.00
Full Colony, with Tested Queen, before July 1......12.00
Same, after July 1..........10.00
Tested Queen, before July 1, 3.00
" " after July 1.. 2.50
" " per half doz., after July 1..........13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,
1wtf Burlington, Iowa.

Bees---127 Colonies for Sale.

I will sell my Park Ridge, Ill., Apiary very cheap. Locality good, market convenient, everything complete. Have more bees than I want. Address COFFINBERRY, 925 W. Madison st., CHICAGO.

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

HONEY

For the past few years I have made this excellent food my leading article. Having the best established reputation in this city as a dealer in PURE HONEY direct from the Apiaries, enables me to obtain the highest market prices. Your consignments and correspondence respectfully solicited.

R. A. BURNETT, Commission Merchant,
Successor to Conner, Burnett & Co.,
28w13t 161 So. Water Street, Chicago, Ill.

LOOK HERE!

If you want cheap bees and hives to suit, good Cyprian, Albino or Italian Queens, Comb Foundation, all kinds, Section Boxes, and everything a live apiarist needs, send for prices.

Full Colonies and Nuclei a Specialty

with good young Queens Give me a call, friends, and I will try and please you. (Box 819)

E. T. FLANAGAN, Rose Hill Apiary,
5w1y Belleville, St. Clair County, Ill.

Given's Foundation Press.

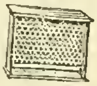
The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.
1w1y **D. S. GIVEN & C.,** Hoopeston, Ill.

AT LULING, TEXAS.

I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.
14w39t **J. S. TADLOCK.**

FLAT - BOTTOM

COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **25c.** per pound, delivered here, Cash on arrival. Shipments solicited.

To avoid mistakes, the name of the shipper should always be on each package.

ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

—"Low Prices, Quick Returns; Customers Never Defrauded."
Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1w1y.

HALBERT E. PAINE, late Com'r of Patents. STORY B. LADD.

PAINE & LADD,

Solicitors of Patents and Atty's in Patent Cases,
29w13t **WASHINGTON, D. C.**

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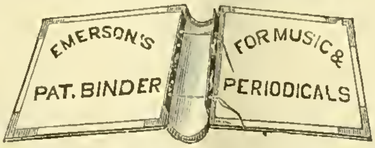
AND KEEP THEM

NEAT AND CLEAN.



The Emerson Binder

IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Bee Journal of 1880..............50c.
For Bee Journal of 1881..............85c.
For Bee Journal of 1882..............75c.

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

THE AMERICAN POULTRY JOURNAL.

Is a 32-page, beautifully Illustrated Monthly Magazi[illegible] devoted to

POULTRY, PIGEONS AND PET STOC[illegible]

It has the largest corps of practical breeders as edito[illegible] of any journal of its class in Americ , and is

THE FINEST POULTRY JOURNAL IN THE WORLD.

Volume 12 begins January 1881. SUBSCRIPTION:- $1.00 per year. Specimen Copy, 10 cents.

C. J. WARD, Editor and Proprietor.
182 CLARK ST., - CHICAGO

A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,

Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

925 W. Madison Street, Chicago, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
1wly Hamilton, Hancock Co. Ill.

We now quote an

Advance of 5 Cents per pound

on the PRICES PRINTED IN OUR CIRCULARS, wholesale or retail. 15wtf

INQUIRIES

CONCERNING

THE CLIMATE,

Mines, Manufactories and Commerce

OF

COLORADO,

will be promptly and truthfully answered by private letter, upon sending One Dollar to the

Woman's Industrial Association,
15w6mp 291 Sixteenth St., **DENVER, COL.**

Advance in Foundation.

The manufacturers of Comb Foundation have advanced the price 5 cents per pound, owing to the increased cost of Beeswax.

Until further notice, the price of all the styles and kinds of Foundation, except the VanDeusen (flat bottom), will be

Advanced 5 Cents per pound,

from the advertised price in my Catalogue.

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL

Excelsior Dunham and Vandervort *FOUNDATION.*

Owing to the large advance in the price of wax, I now quote prices thus: Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

J. V. CALDWELL,
3wly Cambridge, Henry Co., Ill.

THE CONQUEROR.

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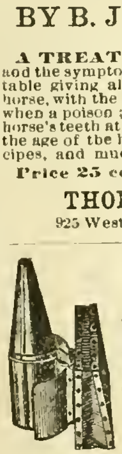

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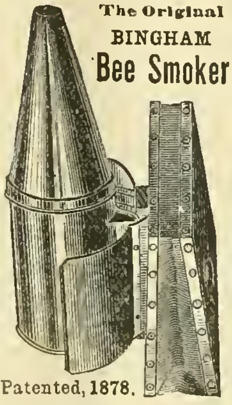

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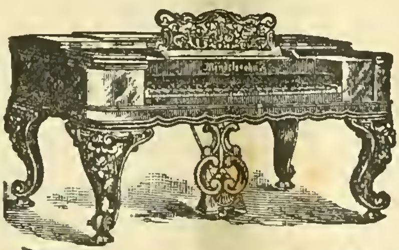

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.................................. 625
The Road to Success............................ 625
The National Convention...................... 625

Convention Essays—

President Cook's Address 626
    Experiments with Bees...................... 626
    Bees Voiding Dry Feces.................... 626
    Summer Experiments........................ 626
    What, then, are the so-called Dry Feces? 627
    Do Image Bees Eat Pollen?.................. 627
    Pollen as Winter Food....................... 627
    Do Bees Breed without Pollen?.......... 627
    Comb an Expensive Article................ 627
Experiments in Comb-Building.............. 627
Control of Fertilization........................ 628
Chaff Hives in Winter........................... 629
Advancing the Science of Apiculture..... 630
Comb vs. Extracted Honey.................... 631

Convention Notes—

Local Convention Directory.................. 632
Central Michigan 632
The National Convention...................... 633
Convention Notices.............................. 633

Selections from Our Letter Box—

Washington Bower 633
Quizzical 633
Extraordinary...................................... 633
Quantity and Quality Excellent............ 633
Hanging Frames.................................. 634
Meaning of Terms................................ 634
A Continuous Season........................... 634
Queen Overlooked............................... 634
Do Bees Spread the "Yellows?"........... 634
Crop Reports 634
Removing Colonies 634
Finishing Up 634
Swarming 634
Bitter Honey....................................... 635
Conundrums....................................... 635
Working Nicely 635
Honey-Dew 635
Most Remarkable in 30 Years............. 635

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The Road to Success.

In confirmation of the policy inaugurated by the BEE JOURNAL, and our persistent advice concerning the effect of apicultural societies and bee and honey shows on the bee-keeping industry, Prof. Cook, in a recent letter, says: "Local societies and big honey exhibitions are the ways to progress, now. Keep these ideas before the people." The following is the platform which we have been advocating for years, and the correctness of which is being indorsed by the most intelligent and progressive apiarists:

1st. Encourage planting bee-pasturage, that there may be, every season, a crop of honey to gather, and making apiculture a fixed occupation.

2d. Fostering District and Local Societies to afford mutual instruction, and strengthen fraternization.

3d. Instituting large and attractive honey and apiarian exhibits, to educate the community to the desirableness and economy of a superior product.

4th. Cultivating a discriminating domestic market, to encourage superiority and excellence.

5th. The sale at all times, and in all places, of an honest article under an honest name.

◆

☞ We expect to give the proceedings of the National Convention in next week's BEE JOURNAL, so that our readers may be fully informed concerning all that will have been done or discussed at this important gathering of the bee-keepers of America. We hope the future meetings will not be held so early in the month of October; we think a week or so later would be a much better time, after the bees are all prepared for the coming winter.

◆

The National Convention.—We give up a large portion of our space this week to some of the essays which will be read and discussed at the National Convention. As we present a number of copies to the Convention for the use of those in attendance, they will be enabled to read each essay in advance, and note points for discussion, or follow them, as they are being read, and mark portions for future inquiry. This method of proceeding will overcome many previous objections urged against essays at Conventions, and greatly add to their usefulness.

◆

☞ Carelessness in our correspondents often causes us much trouble. We have an order for books which contains neither the name of the writer, his postoffice, County or State. All we can do is to wait until he gets sufficiently *vexed* at not receiving them to write us again, and then, should he give us his name and address, we can fill the order; if he should still think we ought to know him without this formality, and neglect to give us any clue to his personality or residence, we must wait until he gets "mad" enough to do so. As the time for the usual winter rush of correspondence is nearing, let us try to impress on our correspondents the necessity of being careful in the matter. Also, if they live near one postoffice and get their mail at another, be sure to give the address we have on our list.

◆

☞ We have made arrangements whereby we can procure tickets for those desiring to attend the National Convention, and return, good for 30 days, for $12.00.

For the American Bee Journal.

THE NATIONAL CONVENTION.

President Cook's Address.

[This and the five following addresses will be read and discussed at the National Convention, to be held at Cincinnati, O., commencing Oct. 3, 1882.—Ed.]

Experiments with Bees.

There are several points in the habits and economy of bees, concerning which scientists and practical bee-keepers are not all agreed. Some of these are not without practical importance. In the researches and experiments which I now describe, I have aimed to settle definitely some of these mooted questions.

Bees Voiding Dry Feces.

The late M. Quinby, who, as a practical bee-keeper, had few if any superiors in our country, taught during the latter part of his life, that bees to winter well required heat to evaporate the moisture from their feces, which in health would be passed in a dry state in the hive. Last winter in an article in the *Rural New Yorker*, I called this theory in question, stating that I had yet to find evidence that it was correct. Mr. N. N. Betsinger in an article before the N. E. Bee-Keeper's Association at its last meeting said: "The atmosphere outside the cluster should not fall much below 60°, and with these conditions the excrement will be discharged in a dry state." Mr. E. Gallup, in *Gleanings in Bee-Culture*, May, 1882, p. 233, says that he has "often seen bees discharge the contents of their abdomens, which was powdery-like," though this was not in the hive but as the bee flew forth on the snow, and was about to die. Mr. C. N. Abbott, editor of the *British Bee Journal*, says that he is "amused that there should be any uncertainty in this matter." He says that "if bees are sent some miles on the cars, where they have room to fly in the box, any one may see the dry excreta." He has "seen hundreds of cases where there have been thousands of grains of bee excreta, about the size and color of coarse gun powder."

Lastly I quote the noted agricultural editor of the Province of Ontario, Mr. W. F. Clarke, who is "quite certain that bees void dry feces." He says in the AMERICAN BEE JOURNAL, vol. 18 p. 374, "when we have discovered the conditions under which bees discharge dry feces only, we shall have solved the problem of successful wintering."

To ascertain the truth in this matter, I first examined the alimentary canals of scores of bees which were taken from the hives in the cellar, just before setting them out in the spring. These bees had wintered exceptionally well, and if Mr. Quinby was correct, were just the ones to show the dry feces. According to Messrs. Gallup and Betsinger, these bees should hold in their intestines the dry excrement. In every case I found no sign of the dry powder, but the semi-liquid mass, containing grains, probably pollen, which I have ever found in such dissections. The intestinal excreta of bees I find to be very much the same at all times; the principal difference being in the number and size of granules and in some cases a more rank odor.

I next took all the material that was on the bottom board of a colony which had wintered so well that there were very few dead bees in the hive, to Dr. Kedzie, and asked him to report the character of the contents. The result of the analysis gave 75 per cent. wax, the remainder consisting of sand, and parts of dead bees. Prof. Beal and I gave the same material a careful microscopic examination, and though we found the powder-like grains, referred to by Mr. Abbott, their character was not such as the appearance of the feces would lead us to expect, in case they were fecal masses. I examined these very carefully, and in almost every one I found compound hairs, just such as are found on the bodies of bees, and which I have never found in the intestines of bees. In some cases I did find that there was considerable matter that did not melt as does wax, and which seemed to contain pollen, but the form of these masses, and the fact that hairs were embodied in them, leads me to conclude that they originated in the same way that the similarly formed wax pellets did, with which they were associated, and of which they often formed a part. Where the bees had wintered well, and there was no sign of dysentery, there was not the least fecal odor to this mass on the bottom board beneath the bees. After a full examination, I became so thoroughly convinced that this mass was not at all fecal in its origin, that I put large bunches of it into my mouth and chewed them, to find in every case a nearly tasteless, wax-like gritty substance, with no possible taste to hint of a fecal origin. The grit is easily accounted for as sand will blow into the entrance of the hives in the autumn. Prof. Beal and I saw these sand-grains with the microscope, and Dr. Kedzie met the same in his examination.

Summer Experiments.

During the months of June and July last, I experimented with three different colonies of bees, at three different times, as follows: I shut them in, so that they could not fly, and gave them clean hives, well ventilated with nothing in them but the empty frames, though in one case I added foundation. The bees were left in this condition for two or three weeks, and each colony fed daily from one to three pounds of the best granulated sugar, reduced to a syrup by adding 8 lbs. of water to 10 lbs. of the sugar. The hives were empty of combs, save as the bees built them, and so the bees had a chance to fly in the hive, and in the middle of the day, as the heat would become great, they would be irritated very much like they would if carried on a journey. The hives were covered with wire gauze which was painted green. At the close of the experiment in each case the bottom-board was covered with the powder-like grains, which all of my large class of students pronounced at once to be the droppings of the bees. There is no wonder that the gentlemen above referred to have been deceived. To one acquainted with fly specks, there would be no doubt in regard to their nature, until he gave the subject close scientific examination. All of these masses contain wax, bee-hairs, and many of pieces of wood, quite large grains of green paint which they had cut from the wire gauze, some of which were semi-cylindrical; and in one case where there was a piece of cotton cloth in the hive, long cotton fibers. Some of the wood splinters were still attached to the hive, and yet surrounded with the pellets, the hairs winding around the wood. In all of these cases the entrances to the hives were closed with common wire gauze, and in every case there was a small windrow of these pellets just outside the gauze.

Now that these were any of them fecal pellets, notwithstanding their appearance, is entirely disproved. Careful dissection of scores of bees found the same semi-liquid mass referred to above, thick with pollen grains, which in one case Prof. Beal identified as pollen grains of the pine, with no sign of bee hairs, paint particles, or wood splinters. Secondly, many of these pellets had incorporated in them cotton fibers, wood splinters, and paint masses that could not have gone through the intestinal canal of the bees. Thirdly, the bees could not possibly have discharged their feces outside the entrance, through the wire gauze, as seen in the little windrows. Lastly, if the masses, which embraced the wood-splinters, passed through the bees, the slivers must have done so as well, but these were attached to the hive, by one end, and so if they passed through the alimentary canal of the bees the hive must have borne them company; which, notwithstanding the great achievments of bees, will hardly be credited even by the most credulous. I am much indebted to Prof. W. J. Beal and one of my students, Mr. W. M. Badcock, a very careful and painstaking young man, both of whom have given this subject careful investigation, and feel certain that the masses cannot be fecal.

I will further state that in a few cases I found real feces in the hive. These, consisting of dried pollen grains, were strung out in a row, and in every case there was a stain by the side of the mass, indicating their original semi-liquid condition in which the fresh feces are ever found. These masses were like the intestinal excrement, and not at all like the so-called fecal masses described above. There is no doubt but that bees, if long confined in their hives are irritated, either by too great cold or too great heat, or continual disturbance as by jarring, will have to void their feces, and, if they cannot fly out, they will discharge these excreta in the hives; but these will never be dry, but always semi-liquid.

What, Then, Are the So-Called "Dry Feces."

Mr. Badcock suggested that they might be masses of refuse which the bees had packed in their pollen baskets, which gave rise to the peculiar form. But the fact that some of these were wound around attached splinters, makes this explanation untenable. It must be that bees knead together, by means of their jaws, the wax, the hairs that they collect in dragging dead bees, and other refuse, which they have occasion to cut away or remove. I cannot explain why they thus waste so much good wax, unless they find that their jaws, like the seamster's thread, work better if waxed.

Do Imago Bees Eat Pollen ?

The question is often raised by writers on bees, whether the mature bees eat pollen. It is well known that bees will winter just as safely, and probably with more certainty, if they have no pollen. In fact bees do just as well if wintered solely on sugar syrup, which is a pure hydrocarbon and entirely destitute of nitrogenous material, which all honey contains, in the slight amount of pollen gathered with it. It has been suggested that as bees are very active, and so must expend considerable muscular energy, the albuminoids are indespensable in their food. The fact that we always find abundance of pollen in their alimentary canals proves that bees do eat it, and that all does not go to feed the young bees or brood. The fact that we find so much pollen in the rectum, would show that this pollen is not very well digested by the imago.

Pollen as a Winter Food.

Some of our ablest bee-keepers think that eating too much pollen during their confinement in winter, may give rise to dysentery, and cause the fatality so much dreaded by bee-keepers. Careful experiments, which I have carried on for several years, give support to this view. No one can doubt but that dysentery comes from over-distended intestines. As we have seen, the excreta of bees consist largely of pollen grains. Reason would sustain the argument from experience, that bees without pollen in the hive might winter more safely. Surely if the bees were induced to eat much of the pollen it could but act disastrously, as we have seen that much is left undigested.

Do Bees Breed without Pollen ?

It is often asserted that bees can rear brood without pollen. This is certainly a mistake. In all the cases tried this summer, and several similar ones previously tried, I have failed signally to secure any brood. If fed honey there might be some brood reared, as bees collect some pollen in the honey, but when I have fed pure sugar, I have signally failed to rear brood. By opening the hives just at night and inserting a comb containing pollen, I at once secured brood. I have for several years put a portion of our bees in the cellar, each season, to winter, with the combs of pollen carefully excluded from the hives. Such never contain brood in the spring as I set them out, while the others often do. Some of our apiarists report differently, which I cannot understand.

Comb an Expensive Article.

Mr. Langstroth, the great Huber of America, states in his classic work on the Honey Bee, that it takes from 13 to 20 lbs. of honey to feed the bees while they secrete one pound of wax. My experiments, were it not that the bees were in a very abnormal condition, show that wax is even more expensive. The chemical composition of wax, which is much like that of fat, makes it easy to understand how bees can secrete it on a diet purely of the hydrocarbons.

Agricultural College, Lansing, Mich.

For the American Bee Journal.

Experiments in Comb Building.

PAUL L. VIALLON.

To ascertain the quantity of honey or sugar required to build 1 square foot of comb, and the quantity of honey required for 1 lb. of wax, the following were my experiments :

I took the bees from two colonies, putting them in two empty hives, and confined them in a room arranged for the purpose. I gave them nothing but water for 2 days, so that I would be certain they would have used all the honey taken during the shaking and brushing into the empty hives. In two cases during my experiments I had to feed after 12 hours, as they showed signs of starvation. Before feeding, I took care to cut out and scrape all the combs they had made. The hives were numbered 1 and 2, the bees weighed every time, so as to always have as much as possible the same amount of bees. No. 1 contained 5¾ lbs. and No. 2, 5½ lbs. of bees.

Fed No. 1 with 2 lbs. of brown sugar made into syrup, and No. 2, with 2 lbs. of white sugar, also made into syrup. No. 1 gave 167 square inches of comb and No. 2, 68 square inches. I reversed the feeding, and No. 1 gave 77 inches, and No. 2, 148 inches. I fed both with 2 lbs. of honey, and got from No. 1, 55 inches, and from No. 2, 48 inches. The 55 inches of comb, including all scrapings, weighed 2¼ ounces, and its average thickness 1⅙ inches. Judging from that, it would take 14 lbs. of honey (without pollen) to make 1 lb. of wax.

By taking the average, it would take about 2 lbs. of brown sugar, 4 lbs. of white sugar, and nearly 6 lbs. of honey to make 1 square foot of comb of an average thickness of 1⅙ inches. But as the combs obtained were thicker than those generally built naturally, we may safely reduce the above quantities ¼ to ⅓ per cent. Now, as we know from analysis that honey contains from 45 to 50 per cent. of grape sugar, we may account for the difference of results between sugar and honey, and I am certain that in a flow of nectar that more inches would be built and more wax secreted from the same amount of saccharine matter, as nectar is composed of 55 to 60 per cent. of cane sugar and contains no grape sugar. Having no grape sugar, I could not experiment on it so as to see if bees would build combs with it only. I have repeated these experiments several times with but slight variations.

As the above experiments were made without pollen, I went over the same with pollen, and the result was a gain of about 15 per cent. in inches and quantity of wax. In each experiment I changed bees so as to always have old and young, and always had the queen with the bees. I would also state that it was not always the colony containing the most bees which gave the most wax, and on one occasion using a smaller hive, 3½ lbs. of bees gave about the same result.

During the above experiments I had a chance to observe the eggs laid by the queens, which they would do moderately as the combs were built, and noticed that when fed with sugar the eggs were removed by the bees; in one instance a few remained in the cells and seemed to be dead, nearly as soon as hatched; with the honey a few eggs would hatch, but the young worm would be invariably removed in 2 or 3 days. This living of the worm was due, I suppose, to the small quantity of pollen contained in the honey, as, after diluting the honey and filtering it, the result was the same as with sugar. I went so far as to give them a frame containing eggs and larvæ one day old, taking care that there was not a grain of pollen, and continued the feeding with honey, and in 24 to 30 hours all the eggs and larvæ had been removed by the bees. After several other trials with negative results, I collected some pollen from some combs and gave it to them during the feeding, and in every case the eggs hatched and the worms went through all the ordinary phases and hatched perfect bees, and I came to the conclusion that without pollen or a substitute, no brood was reared. In all these operations, I always had some water in the hive.

As these experiments were made in confinement, I intend to repeat those in regard to the quantity of honey required to make 1 pound of wax in the open air, as soon as there is no flow of nectar from the field, though there is always a little; but I will place another hive with the same amount of bees on a scale and watch if there is any honey coming in during the experiment, and deduct the difference. If it was possible to obtain enough nectar, I am certain that the result would be the same as with brown sugar, and that not more than 5 or 6 lbs. of honey is required to make 1 lb. of wax. I believe that in the open air the bees will give more wax, as being at liberty they will work with courage.

In these experiments, you will see that some of the feed is stored in the cells, and the feeding must be pushed a little further, and when the combs are removed, they must be weighed with the little honey in them, these washed and re-weighed after they are dried, and the amount of honey deducted, etc., from the amount fed.

You will excuse me if I do not enter into more minute details, but I think that you will fully understand how the experiments were made, and that you will be able to repeat them, and I hope your results will corroborate mine. Do not be afraid to ask for more details, as I am at your service, and will cheerfully give them.

Bayou Goula, La., Sept., 1882.

For the American Bee Journal.

Control of Fertilization.

G. W. DEMAREE.

Bee-keepers of America have just cause to feel proud of the progress already made in the science of breeding, and the manipulation of bees, yet they have cause to feel humiliated that one of the chief factors that go to make up the conditions of scientific breeding has, thus far, eluded the grasp of the most studious and careful of our apiarists. I refer to a more perfect control of the males or drones in the process of mating.

Every other important problem pertaining to the science has been solved by the combined wisdom of the fraternity, but before this dark mystery we stand as helpless as so many infants.

It is admitted by all intelligent breeders, no matter what may be the peculiar views of each as to the most profitable "strain" or breed of bees, that careful selection is essential to successful breeding. It is an easy matter to control the stock on the side of the mother bee, both as to the "strain" or type sought to be perfected, and the individual specimens best qualified to transmit the qualities sought for in breeding. But with our present knowledge no such control can be had over the males or drones. It is true that much may, and has been done by resorting to isolated localities where the queens can meet no other drones than such as the apiarist keeps in his own yard, but this can only give general control. It places the apiarist as a breeder but little above the shepherds of thousands of years ago whose flocks bred promiscuously, regardless of the weak and the strong.

It is claimed that the males can be controlled in breeding by the use of all worker combs, by which means such drones as are not desirable may be suppressed. All this looks feasible, but a philosophical question arises here as to what will be the tendency of such a course. All will admit that the instincts of bees leads them to rear more or less of drones even in worker combs, and these dwarfed specimens will go forth to propagate the race, and thus take the place of properly developed specimens. It is not hard to foresee the evil effects that must ultimately follow such a course.

These dangers, however, can be averted to a good degree by allowing each colony a few square inches of drone cells to satisfy their yearning for drone progeny, and remove the necessity of rearing dwarfs for the want of full-sized cells.

The frame which contains the drone cells should be marked so that but little time need be lost when it is desirable to clip the heads of the drones with the honey knife.

The genuine "innocence" of some who write on the subject of "purely mated" queens is calculated to provoke a smile on the part of those who have given the subject careful attention. Those who expect to have their queens mated with the drones reared by a few select colonies in their own apiaries, when situated in a locality where there are other bees, simply deceive themselves and those who "bite" at their advertisements. Situated as I have been for years past I could give facts enough to show the utter unreliability of such a course in breeding.

It requires concert of action on the part of those who keep bees in any locality to insure uniformity of mating even as to "stripes," as some interested breeders sneeringly put it. I wish to repeat here what I have said somewhere in my writing, viz.: That "an inferior specimen of a superior race is not necessarily better than a superior specimen of an inferior race." I think this is a fact that will hold good under all circumstances. Hence, if the honey bee is not an exception to all the rules known to the breeders of live stock, why, then, to have perfect control, the breeder must be able to select not only the race or "type" to breed from, but such specimens of the race or type as in his judgment are best qualified to transmit the qualities sought to be established in his ideal bee. By careful application of these rules our stock breeders have been able to surprise the world with their wonderful achievements. But I undertook to write this essay in order to relate some experiments which I have tried the past season in my researches for a method to control fertilization, and this I do with the hope that although they were failures as to the main object in view, they will not be altogether unprofitable and uninteresting. After trying many experiments to induce queens to mate in confinement with utter failures, it occurred to me that if some device could be invented which would allow the workers to pass out into the open air and at the same place permit the queen and drones to pass into an apartment prepared for them, and fly voluntarily, the conditions would conform so nearly to Nature's method that there would be hopes of success. To carry out this plan I made a box 18 inches square at the top by 18x2 inches at the bottom, and 12 inches deep, thus giving a box—when set on legs for a support—with three perpendicular and one sloping side, which last answered as a sloping bottom to the box. On top of this box was set a "tent" the same size of the top of the box and 12 inches deep, made like a square "show case." The sides of the tent were covered with paper cambric, and the top with the thinnest crape I could get. A common nucleus hive was fastened against the perpendicular side of the box opposite to the sloping side, and its entrance was made to connect with a "covered way" through the narrow part of the box at the bottom of the angle. At the termination of the "covered way" two saw cuts were made so as to admit a perforated tin plate to answer as a queen and drone excluder. The covered way was so arranged that the worker bees could pass out through the perforations in the tin plate, and when the covered way was uncovered on the inside of the tent, the queen and drones being excluded from passing out through the slots in the tin, could rise and fly in the tent. Having matters arranged in this way, I stocked the nucleus hive in the usual way, except I fitted a piece of drone larvæ just ready to hatch in one of the combs, and 24 hours afterward I gave the nucleus a matured queen cell. The drones were hatching continually, and I "sorted" them, carefully removing such as did not come up to my standard of "the best." There were about two dozen of them when culled.

When the drones were four or five days old they began to come to the entrance, and seeing the light above, they made no effort to pass out through the holes in the tin, but rose and flew lively in the tent. I watched them with much interest, fearing that they would not know how to return when their frolic was over, but in this there were no grounds for fears; they could pass from the entrance to the tent and back again as friskily as if under no restraint whatever. Thus far things looked flattering, and I waited for the queen's turn to try her skill. On the evening of the fifth day of her age she came out and flew with pomp and splendor in the tent, the soft walls and roof of the tent were but little in her way, and she seemed to enjoy life hugely. She was able to return without the least confusion. The first day she made six trials in the tent, all the while from a half dozen to a dozen drones were flying with her, and they waltzed around in the gayest fashion. Day after day the queen and drones sported in the tent together, as though they had not the remotest idea that they were males and female, and old enough to get married. She waltzed out two sets of drones, and kept up her flights till 20 days old and then gave it up. At 30 days old, she began to lay eggs and laid sparingly for two or three days and died.

The second experiment was much like the first as to the flights of the queen in the tent. She kept up her flights with the drones till she was 18 days old. On the evening of the eighteenth day of her age I opened a valve at the top of the tent and let her out; she was gone but a short time and returned, but in a few minutes she came out again and disappeared into space; the result was that in just 30 minutes from the time she was first let into the open air she returned with the evidence of having met a drone, and in a little over two days after she was laying. She lived only about a week after she commenced to lay. Now let us see what the results of these experiments indicate. Both of the confined queens had sisters of the same age of themselves, and these were laying rapidly and had sealed brood, while the confined queens were flying day after day in the tent, surrounded by as gallant a band of drones as could be selected. The confined queens were on the wing from one to two hours each day for 12 or 14 days, without showing the slightest signs of excretion or substance adhering to the extremities of their abdomens, thus disproving Ulivi's theory. One of the confined queens flew 12 days in the tent right among the drones, without "mating," and when set at liberty found a mate in 30 minutes.

The experiments showed that the vitality and endurance of the queen exceeds that of the drone many times over.

They further show that retarded fertilization is injurious to the queen, and when long delayed proves fatal to her existence. The excessive rainy weather made it inconvenient to pursue the experiments further this season, but I hope to take them up in the future. By means of the invention above described, I hope to control, in a good measure, the mating of specimens to breed from. I discovered, and hope to take advantage of it, that the queens in confinement, when of the proper age to meet the drones, become exceedingly anxious and desperate to escape their imprisonment, and will fly quite late in the evening, after all the drones have retired. The drones confined with the queen will keep up their clamor for liberty long after the other drones have retired for the day. With this state of things under our control, it will be seen that by giving the imprisoned queen and selected drones liberty to fly after other drones have retired, will, as nearly as possible, insure select mating.

Christiansburg, Ky., Sept., 1882.

For the American Bee Journal.

Chaff Hives in Winter.

O. O. POPPLETON.

As my idea of essays at a Convention, is that they are intended more as a basis for discussion than as an elaborate treatment of the subject, I will confine myself to what I consider the advantages and disadvantages of chaff-hive wintering, over other methods, and a few ideas suggested by my experience with them.

I want to say at the outset, and emphasize it, too, that I find a proper management during the honey season is just as necessary a factor in successful wintering, as is the mode of wintering itself; but this part of the subject I will not attempt to consider.

Chaff-hives have now been in quite general use for four or five years, and reports of their success or failure are conflicting. I have used them exclusively for seven winters, and the largest loss I have had any one of those winters has been about 5 per cent., while the average loss has been less than 3 per cent. These losses are net ones, after both wintering and springing.

I find wintering in chaff-hives possesses the following advantages over other methods:

1st. They admit of being prepared for winter as soon as the honey season closes, before severe cold weather sets in.

2d. When once prepared for winter, they require little or no attention until spring. This is quite an advantage as it allows us to turn our entire attention elsewhere for four or five months of each year.

3d. It requires less labor to prepare bees for winter, than by any other mode.

4th. The sun cannot warm up the inside of hives so readily as it can single-walled hives, thus inciting the bees to flight when the air is too cold for them to do so safely. I think all can see the advantage of this, especially during the fall and spring.

5th. The inside of the hives are readily accessible at all times during the winter, when weather is warm enough to allow bees to be handled.

6th. They thoroughly protect bees from the effects of changeable weather during the spring months. This is by far the most important advantage of all, and, as I said at the National Convention last fall, "this one thing alone in my opinion amply pays for their extra cost." The spring of 1882 was a marked example of the truth of that opinion. Several of my neighbors, who winter their bees in cellars, have told me that they were troubled exceedingly during the spring and early summer with chilled brood, while I do not know of having lost a single cell of brood from that cause. I am so thoroughly satisfied of the value of this advantage, that I hazard the prediction that a score of years hence, the most successful wintering will be accomplished by the uniting or blending the use of chaff-hives and cellars, or by the use of more thoroughly arranged chaff hives than we now have.

7th. They prevent spring dwindling. This is also a marked and important advantage. I have no trouble in saving colonies that possess a good queen and a pint of bees at the commencement of pollen gathering.

8th. They are valuable helps in building up nuclei and weak colonies all through the season. I think all experienced bee-keepers will see the value of this, especially during such a season as the present one has been.

9th. They seem to prevent a too early commencement of brood-rearing, which is considered by some of our ablest apiarists to be one great cause of spring dwindling. My observations are that bees in chaff-hives do not commence rearing brood until they can fly quite freely in the spring; but after once commencing to breed, their more even temperature allows them to do so more rapidly than in single-walled hives.

Their disadvantages are:

1st. Their extra cost. This is quite an item, but not a serious one to those who make bee-keeping a regular business. Such are forced to have the best hives and appliances they can procure.

2d. Their large size and weight makes them unhandy to move about in the apiary. This is a serious objection to those whose system of management requires the frequent moving of hives, and who have no extra help convenient. To me this has been a very small objection.

3d. The difficulty of getting into the hives in the spring, on account of having to remove loose chaff. This objection applies only where loose chaff is used for packing, and is entirely obviated by the use of chaff cushions.

I have long been of the opinion that, other things being equal, the manner of wintering that best prevents the accumulation of dampness in the hive, will be the most successful. I regard this as the prime object to be attained by any method. Those colonies which come through best, almost invariably come through with dry bees, dry combs and dry packing, and this is especially true with bees in chaff-hives. Almost any kind of chaff, properly prepared, makes an ample protection from the cold; but I find quite a difference in different kinds about their liability in holding dampness. I have used timothy, wheat, oats and buckwheat chaff, and prefer them in the order named. Am now using timothy chaff exclusively.

My experience leads me to give the following suggestions in regard to the use of chaff-hives:

1st. Pack as early in the fall as possible. I have noticed that colonies packed before severe weather sets in do the best.

2d. Leave packing on as late in the spring as possible. This is very important. I never take any packing off until the middle of May, and not then unless colonies get very strong.

3d. Use the finest, lightest chaff you can get, and have it freed as much as possible from straw, etc. As I said before, I use timothy chaff, and am very particular to free it from straw by sifting it.

4th. Use a thickness of at least 4 or 5 inches of chaff on the sides and top of hives. The chaff at sides of my hives is a little over 5 inches thick, and if I was to change the thickness of the chaff at all, I would increase instead of diminishing it.

5th. Thoroughly protect the bottom of the hive as well as the top and sides. I know that this advice is directly opposite to the practice adopted by some who winter very successfully, but my own careful observations lead me to advise as above.

6th. Wherever possible, use chaff cushions instead of loose chaff. If one has only a few colonies, this is not so important; but it is almost impossible to handle the bees in a large apiary when packed in loose chaff—at least I find it so on our windy prairies. I now construct my hives with double walls in front and rear, which are permanently filled with loose chaff, using cushions at each end and one on top. These cushions can all be removed in an instant of time when desiring to perform any manipulation of the hive, and can be quickly replaced. It is a very tedious job packing and unpacking bees with loose chaff every fall and spring, and I do not think any large bee-keeper will attempt it more than once.

7th. Have as much empty space as possible inside the hive and outside the packing, and in no case allow the top of the hive to rest directly on the packing. I use very large hives with from 2 to 5 cubic feet of empty space, and have frequently noticed that those hives having the largest amount of this empty space, usually keep the dryest.

8th. Crowd bees on as small a space as possible. I winter my strong colonies frequently on 7 combs, and never more than 8, my frames being of about the same capacity as the Langstroth frames.

9th. Crowd the packing as close up to the bees as possible. The less empty space there is inside the packing, the more equal can the bees keep the temperature.

10th. Have winter passages through all the combs. I consider this very important with any mode of out-door wintering.

In conclusion I want to say, that while I do not consider the method of wintering in chaff-hives to be the best one under all circumstances, and for all bee-keepers, I do think that the longer it is practiced, the more favorably will it be thought of. If my cellar was a suitable one, I should experiment with the putting of some thoroughly packed hives in it during the winter, thus combining the advantages of our two principal methods of wintering. I hope some of our wide-awake bee-keepers, who are more favorably situated than I am, will make some thorough experiments in this direction.

Williamstown, Iowa, Sept., 1882.

For the American Bee Journal.

Advancing the Science of Apiculture.

J. E. POND, JR.

The science of apiculture is still in its infancy—a healthy babe if you please; still its growth has been hardly commensurate with its years, but with careful nurture and right management it will eventually become a giant.

The advent of frame hives formed an era in this occupation, which before that time was considered of little account, except among a few specialists, causing it to be classed among the sciences, and to become a certain success in the hands of any one who will devote brains and labor to it. The old box-hive management was largely a matter of luck, even among those of the largest experience, but with frames, pecuniary profit is sure and certain with those who understand the business, and beginners, even, can, by their aid, manage an apiary without loss, and with a fair chance to realize a profit. All honor, then, to the Rev. L. L. Langstroth, for what he has done for apiculture in giving us the movable frame. His works will follow him, and his memory be held dear in the hearts of bee-keepers long after his frail body lies moldering in its mother earth, and bee-keepers, generations hence, will bless his name for making the management of the hive so simple and so easy. But why has not that advancement been made in bee-keeping since the era of the frame, that its advent seemed to warrant? I do not wish to be understood as assuming that no advancement has been made since that time, but I do assert that such advancement has not been made as ought to have been, or might have been, had our bee-keepers been a little less selfish, and actuated with a desire to benefit humanity as a whole, rather than themselves individually. To be sure, there has been but little encouragement given to any one who earnestly desired to progress. Attempts in that direction have either been "damned with faint praise," or died for want of sustenance. New ideas have been frowned upon, and new theories, especially if they seemed to combat old fogy principles (which were the natural result of the box-hive and brimstone style of management) were either looked upon as innovations, and condemned without a trial, or else strangled at birth by the cord of self-sufficiency. Even the inventor of an acknowledged good thing was not allowed to receive the reward he so justly merited, but attempts were at once made either to decry the merits of the invention, or to avoid payment for the same, by adopting some device which, when used in connection with it, was supposed to dodge the claim of the inventor, even though admitted to be anything but an improvement.

In all ages such has been the case with improvements, and in apiculture no less than any other. No one is willing to accept a new thing at first, or drive his wheels out of the old ruts, no matter how clumsy the old or how rough the road, but when the new device has won its way to favor, a host of imitators at once arise, and while they are not willing even then to acknowledge the merits, they are ready to adopt the principles, claiming that the additions or changes they have made are the chief, if not the only causes, of its success. As in hives and other supplies, so in matters relating to the honey bee itself. It took years to learn the economy of the hive, the duties of queens and workers, and the use of the drones; and even these facts were not discovered till poor blind Huber set himself to the task. Parthenogenesis was scouted as being at variance with the laws of nature, and even now there are found those who still insist the Dzierzon theory is an impossibility.

The advent of the Italian bee was an immense advantage, for its coming and adoption was the means of settling forever many mooted questions, and of our learning many things that heretofore were hidden mysteries, and had our bee-keepers even then striven as hard to gain a knowledge of the bee itself as they did to make it a pecuniary profit to themselves, we should have progressed much farther than we now have.

The invention of foundation and the extractor (both foreshadowed by Langstroth years ago) were long strides forward, and their tendency has been to make uncertainty certain, and a barely paying business largely remunerative. Why is it, then, with all our past and present advantages, that we have made no greater progress? Other occupations, which a few years ago possessed far less prospects and advantages, have outstripped us in the race, and have gained a world-wide reputation, and become a means, rather than an auxiliary, in gaining a competence. Why is it not so with apiculture? The questions do not seem hard to answer, and I propose to briefly give my views in regard to them.

Bee-keepers, as a rule, are not entomologists, and entomologists, as a rule, are not bee-keepers, and bee-keepers have not taken that pains they ought, to give enough study to entomology to enable them to know the general peculiarities of the bee. In days past, and largely even now, bee-culture was, and is used, simply as an auxiliary to agriculture, and while considered profitable, was only so because the bees boarded themselves and required (at least received) no care. If they gave a yield of surplus well and good, if not, their owners let them die out, saying, "I never did have luck with bees." Even those who adopted it as a business simply engaged in it for the profit to be derived from it without knowing aught or caring aught, save for the mechanical part of its management. No time was given to the study of the characteristics of the bees themselves, and no thought given to the business, except to reckon up the gain or loss at the close of the season. Occasionally some one better posted than his neighbors would attempt some experiments which seemed to him conducive of good results, and endeavor to get his neighbor to follow his lead, but he was only laughed at for his pains, and driven from his position by raillery and ridicule. If a scientist gave a view or opinion at variance with old-fashioned notions, it was at once said, "What does he know about it, he is only a book man? We have kept bees for 40 years in the good old way of our fathers, and he can't tell us anything about it." Prejudice and superstition have prevented progress in many directions, and in apiculture as much, if not more, than in any other, and until we divest ourselves entirely of such prejudice, learn that this is a progressive age, and that we, even well-informed though we are, have yet much to learn, we shall grope in the darkness of self-conceit, and never see the light of progress and improvement. No one need fear the results of experiments or discussions. Truth is immutable, and will live through countless ages. Although experiment and discussion may seem to disprove some of our pet ideas, upset some of our cherished fancies, and prove us in the wrong, the truth itself can never be successfully assailed, and though falsehood and error may, for the moment, seem to be in the ascendant, "truth, though crushed to earth, will rise again," and triumphantly assert and maintain its position against all odds, and falsehood and error be buried so deep as never to be resurrected. From ages long gone by till now it has been easy to write, but it is too often the case that those who know the least of a given subject are the first to write upon it; so with apiculture. Many who are actuated by a desire simply perhaps to see themselves in print, write a plausible article, the only merits of which are its finely turned sentences, and fully rounded periods. Others with axes to grind, for the purpose of turning an honest (?) penny; others still, actuated it would seem with no motive other than to deceive, put themselves before the public. All of these would do no harm if the readers were bee-keepers of experience; but, unfortunately, these articles are read by many who have just commenced keeping bees, and to a great extent look for information from the articles they read in their bee papers. They are taken, and taken in by them, and when they find out the falsity and incorrectness of them, they at once denounce all writers, and those who are striving to give correct information are looked upon as humbugs and swindlers as well as the other class mentioned, and the result is that apiculture receives a blow from which it takes a long time to recover.

There is a remedy, and one that will give the occupation a new impetus and tend to advance it to the position it ought to occupy. It remains with us, however, to adopt and apply the remedy, and no matter if it is somewhat caustic and burns our self-conceit, we must vigorously apply it till the sore is healed, and a cure effected. That remedy is, for us to study the business in all its bearings, and particularly the habits and peculiarities of the honey bee. State nothing as facts until fully proven; give theories as theories only, and the reasons for accepting them, but until fully backed up by carefully conducted experiments, state them as theories still. Write for your special journals and write often, but do not be guilty of writing unless you have something to write about; state results briefly and the causes which led to them, and always give a full account of unsuccessful as well as successful experiments. Be ready at all times to amicably discuss any matter in which your own opinion is not accepted by others as correct. Do not hastily adopt a new thing because it is new, and, above all things, do not hastily condemn a new thing before fully understanding it. Avoid personalities in discussion, whether written or spoken, and, as earnest thinking men, do all that in you lies to advance the cause in which you are engaged and which you so fondly love. Thus will the science of apiculture be made to advance and take its proper place among the legitimate means of support in the world, and become a source of mental discipline and pecuniary profit. Consider the honey bee not simply as a means of gain, but as a wonderful instance of God's goodness and kindness to man, who created the world and all therein contained for this his own glory and man's comfort and pleasure. "Go to the bee (ant), consider her ways and be wise," remembering that he who gave the honey bee its wonderful instinct (almost allied to reason) is the Creator of us all, and that from him only can we obtain support and sustenance, and from what we learn of the wonders of the created, learn to look with love and reverence to him, the Creator. Attend the Conventions to which you are sent as delegates, not simply with the idea of having a good time and making pleasant and agreeable acquaintances, but go there as men who have a purpose to attain, a duty to perform, and in its attainment and performance be actuated solely by a desire to aid, assist and encourage all steps that may be taken to forward the interest of apiculture. Work with head and heart for the interest of the whole; frown upon error, and heartily cheer for the right; do not resolve the Convention into a scandal shop, or form it into a mutual admiration society, but give to all their just due, and encourage progress, no matter from whence it originates; respect the opinions of others, even when they clash with your own, and by argument instead of sarcasm, strive to carry your own points. Let your points be for the general good, and not for a selfish purpose only.

Thus shall we make apiculture a noble profession, and cause it to proudly hold up its head among other occupations, and become a power in the land.

Foxboro, Mass., August, 1882.

For the American Bee Journal.

Comb vs. Extracted Honey.

DR. C. C. MILLER.

Shall we work for comb honey, and how shall we get the most of it?

I don't believe much in essays for Conventions, but as the President of the National Convention has honored me by asking me to write on the above subject, I cheerfully make the effort, especially as the subject is one which is to me intensely interesting, and I hope something in the essay may provoke discussion. If there is discussion, I know I shall learn something from it.

Practically, I answer the first part of the question by saying that I have this season taken fifteen thousand pounds of honey, and my extractor has stood untouched the whole summer. This answer is, however, only for the present time; for changes are so constantly taking place that another year may make extracted honey the most profitable for me to raise. The answer is also only for myself. For many others I am satisfied it is better to extract all honey. Not 50 miles from where I live is a man who sells thousands of pounds of extracted honey at the highest price which can be obtained for comb. That man would be foolish to raise comb honey in preference to extracted. Under the present condition of matters, probably each producer must decide for himself which kind will yield the most net profit. A few years ago I raised extracted honey exclusively, and I may be allowed to give some of the reasons why I now prefer to raise comb honey. So long as I had only enough honey to supply the home market, I could sell extracted for about the same as comb, but having now a larger apiary, I am obliged either to ship to the large cities, or spend a good deal of time in developing a larger field as my home market. I think this latter course would take a good deal of my time through the winter, and at that time of the year I want something of a vacation. Moreover, if I sell extracted to the best advantage in a home market, I must spend no little amount of time and labor constantly getting it ready in small packages for retailing. If I ship to the large cities I can ship in bulk the extracted, and be easily rid of it, but a glance at the quotations frightens me from such a course. Comb honey is quoted about double the price of extracted, and I do not believe I can raise twice as much extracted as comb. Possibly, if I had a smaller number of colonies I might. I think one person can take care of a larger number of colonies run for comb than for extracted honey. Then all my fixtures and arrangements are at present for comb honey, and without the prospect of decided gain, I should not want to change. On the whole, looking honestly at the whole ground, I do not think I have made out so strong a case but that I might be induced to change upon being better informed as to the best way of raising extracted honey, or upon a sufficient advance in the price of the same, and I expect to see the price constantly approximate toward that of comb honey. But just at present I hardly expect to use the extractor more than enough to supply my own table, for a good article of extracted I believe to be best for the consumer.

Coming now to the second part of the question, how shall we obtain the most comb honey? If some years of practice, together with lying awake nights studying over the question, may fit one to answer it, then I may certainly lay some claim to be the right man. But candidly, I don't know. If a trip to the Cincinnati Convention will give as full an answer to the question as I desire, I shall feel well repaid for the journey, even if I have to make it on foot. The question is a very general one, covering pretty much the whole field of bee-keeping, involving a large number of other questions, to some of which I may briefly allude. Among the first, comes the question as to the best bees; a question I do not feel competent to discuss, and one which has been much discussed already in our papers. I do not, however, believe that the best bees for business will be had by getting queens from the best strain, and then breeding from them indiscriminately from year to year. Each year I find some colonies that are slow about building up, and make poor work all through the season. Often I have waited for them, hoping each week they would do better, until the harvest was past, obtaining from them perhaps not half the average yield. A colony which lags behind and fails to fill up when all conditions are favorable, should have its queen promptly killed and replaced by a better. A colony which is much crosser than the others should have its queen replaced, for cross bees cannot be so rapidly handled, an important item toward securing the largest yield. This year my bees seemed unusually cross, in fact the crossest I ever had. In one instance a person was attacked with no apparent reason, who had not approached within 6 or 8 rods of the apiary, and followed to a distance of perhaps 15 rods more. I was sometimes stung when walking near the bees and not disturbing them at all. It seemed as if my whole apiary had become cross. I watched closely the deportment of each colony on being handled or approached, destroyed the queens of two that were especially vindictive, and in a short time the whole apiary seemed as gentle as ever.

The right hive, of course, has something to do with the yield, and each man knows what that is, for it is the one he has invented. I am one of the few unfortunates who have not invented a hive; I have not even laid our venerated friend Langstroth under everlasting obligations by improving his hive; therefore, I am no competent judge.

Then comes the question of side and top-storing, and leaving each one to his own favorite plan, I have tried to secure the advantage of both by putting a frame of brood into the super until the sections were well started. By shifting about this frame of brood, or by putting frames of empty sections between those well occupied, I try to get the bees well started early in the season on a large number of sections, and toward the close of the season limit them to as few as may do, by using division boards in the super.

Years ago, while blocking up the cover of a hive to allow a free circulation of air through the brood chamber, Adam Grimm said to me, in his earnest way, "I consider this very important." Since that time I have practiced shoving the super forward on the hive, leaving an open space of perhaps one-fourth inch for ventilation until all swarming was over.

It is hardly necessary to say that starters of some kind must be used, and I am strongly of the opinion that the largest yield requires the largest-sized starters. For 1 lb. sections I prefer starters at least 3½x3⅞ inches in size. That which will be most rapidly used by the bees will of course be preferred. There have been such great improvements, that little seems to be desired in the way of foundation. Some beautiful thin Dunham, made by A. I. Root, delighted me this summer; but on the whole, I think I have never liked any foundation I have used quite so well as the Given, made by Mr. Heddon. To get the largest yield, I imagine that the thinnest foundation must not be used, only so the base be thin.

I suppose swarming hinders the largest yield, and I do not know that I have any new thought as to the best plan to repress the swarming fever. I am especially unsettled as to what is the best disposal to make of swarms that do come. Will the combined wisdom of this Convention please inform me how I shall secure from a colony that swarms, as large a yield as if it had not taken into its head the notion to swarm at all?

Passing by other important items, I will only mention that of pasturage. With all the advantages of natural pasturage, I suspect that shortly bee-keepers will wake up to the fact that their harvest may be extended by special planting to fill in the "gaps." The BEE JOURNAL will tell us to sow melilot, *Gleanings* will tell us figwort. Each one should try these and other good honey plants, gradually increasing the acreage as he finds what is most profitable in his particular locality. I have faith enough in this to believe that it will pay to devote some acres entirely to honey plants, and am anxious to learn the best way to get 5 acres in figwort, 5 in melilot, and to know if it will pay me to raise golden honey plant and spider plant.

This essay is quite too long, but our esteemed friend, the President, should have known to have chosen a smaller subject, or a larger man.

Marengo, Ill., Sept., 1882.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Oct. 3-6—North American, at Cincinnati, O. Dr. Ehrick Parmly, Sec., New York City.
5—Kentucky Union, at Shelbyville, Ky. G. W. Demaree, Sec., Christiansburg, Ky.
7—Marshall County, Iowa, at Marshalltown. J. W. Sanders, Sec., LeGrand, Iowa.
10—Tuscarawas Valley, at Newcomerstown, O. J. A. Bucklew, Sec., Clarks, O.
10, 11—Northern Michigan, at Pewamo, Mich. O. R. Goodno, Sec., Carson City, Mich.
13—N. W. of LaCrosse, at LaCrosse, Wis. G. J. Pammel, Sec., LaCrosse, Wis.
17, 18—Northwestern, at Chicago, Ill. C. C. Coffinberry, Sec., Chicago, Ill.
18, 19—Southern California, at Los Angeles. J. E. Pleasants, Pres., Anaheim, Cal.
21—Northern Ohio, at Norwalk, O. S. F. Newman, Sec., Norwalk, O.
Nov. 1—New Jersey & Eastern, at New Brunswick. J. Hasbrouck, Sec., Bound Brook, N. J.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

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☞ The bee-keepers of Boone Co., Ind., are cordially invited to meet at the office of Barton Higgins, in Lebanon, Oct. 9, at 9 o'clock, a.m., to complete the organization of the auxiliary County Bee-Keepers' Society. The bee-keepers of Hendricks county, Ind., are invited to be present. By request of the Committee.

For the American Bee Journal.

Central Michigan.

The Central Michigan Bee-Keepers' Association held a meeting in the Capitol Building Sept. 19th, and was called to order by President Ashworth.

The first question discussed was the size and style of a building to exhibit bees, honey and apiarian supplies in. After a spirited discussion, a motion was carried by which a committee of three, consisting of Prof. Cook, President Ashworth and N. V. Goodno, all of Lansing, Mich., was appointed, to request the managers of the Agricultural Fair to erect a building suitable for the exhibition of bees, honey and apiarian supplies.

The President then called for an expression of opinion on the best methods of rearing queens. The topic was discussed by E. S. Vannetta, S. Hilbert, H. L. Denny and others. Mr. Denny said when rearing queens for his own use, he stimulated his best colonies to breeding early; so they would have drones flying before there were any other drones out.

A recess was taken until 2 p.m., when Pres. Ashworth being called away upon urgent business, Prof. Cook was called to the chair, and the meeting opened with a renewal of the discussion on the best methods of exhibiting bees, honey and apiarian supplies at the Fair.

Prof. Cook stated that he had this season a queen fertilized in the hive, he also stated that he had used foundation this season from nearly all the different makes of machines now in use, and his bees appeared to work equally well on it all, with no trouble from stretching or sagging except that made upon the Given press, and that he could do nothing with.

The next question was how many bees should be in a hive to winter well.

Mr. Wood, of Grand Ledge, wanted his hives full of bees when he put them in the cellar, and from 15 to 20 lbs. of honey. He usually fed some in the spring to stimulate early breeding.

Mr. Waldo, of Grand Ledge, and E. N. Wood, of North Lansing, preferred wintering out-of-doors on the summer stands.

S. D. Newbro exhibited a very ingenious device in the shape of tongs for lifting the brood frames from the hives, and to hold the combs while examining them; also a machine for fastening the foundation into the section boxes, and other articles.

Narmore & Wood exhibited their hives, section boxes, etc.

E. N. WOOD, *Sec.*

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☞ The fifth annual meeting of the Northern Michigan Bee-Keepers' Convention will be held at Pewamo, Ionia County, Mich., on the second Tuesday and Wednesday (10th and 11th) of October, 1882. Pewamo being on the D. & M. and H. & M. R. R., it will be accessible by rail. The members will do all in their power to make the meeting interesting.

H. M. ROOP, *Pres.*
O. R. GOODNO, *Sec.*

The National Convention.

The North American Bee-Keepers' Society will hold their 13th annual meeting at Washington Park Hall, Cincinnati, O., across Washington Park from the Exposition building. Time, Oct. 3rd to 5th, 1882. First session Tuesday, 10 a. m., Oct. 3. We are encouraged to hope that this will be a very profitable meeting, as we are promised papers from, and the presence of, a large number of our most prominent bee-keepers both in the United States and Canada, and essays and implements of the apiary are expected from abroad to add to the knowledge imparted by the research and inventive skill and methods of our countrymen.

EHRICK PARMLY, *Sec.*

New York, July 12, 1882.

☞The Northwestern Bee-Keepers' Convention will meet at Chicago, Ill., on Tuesday and Wednesday, Oct. 17 and 18, 1882. The office of the American Bee Journal has been kindly tendered as a place of meeting. A cordial invitation is extended to all bee-keepers, and especially those of the Northwestern States, to be present. The meeting takes place during the last week of the Inter-State Industrial Exposition, to enable all to obtain reduced railroad rates. First session at 10 a. m. C. C. MILLER, *Pres.*

C. C. COFFINBERRY, *Sec.*

☞The Union Bee-Keepers' Association of Maryland, Virginia and West Virginia, will meet at Hagerstown, in the room of the County Commissioners, at the Court House, on Wednesday, Oct. 18, 1882, at 1 o'clock, p. m., the session to last two days. The Washington County Fair will then be in progress, which will give persons an opportunity to attend the exhibition. All persons intending to go will please drop me a card, so that I may secure for them half-fare rates.

J. LUTHER BOWERS, *Sec.*

☞The fall meeting of the Northern Ohio Bee-Keepers' Association will be held in Whittlesey Hall, Norwalk, O., Saturday, Oct. 21, commencing at 9 a. m. A full attendance is solicited, as it will be a meeting of more than usual interest. Principal subject for discussion: "How shall we winter our bees without loss?"

S. F. NEWMAN, *Sec.*

☞The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning County, in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th.

LEONIDAS CARSON, *Pres.*

☞The Marshall County, Iowa, Bee-Keepers' Association will hold its regular session at the Court House in Marshalltown on Saturday, Oct. 7, at 10 a. m. Subject for discussion, "How to prepare for wintering." We hope to have a good meeting.

J. W. SANDERS, *Sec.*

Vice President for Kansas.—Mr. D. P. Norton having peremptorily resigned, I hereby appoint Mr. S. J. Miller, of 314 Kansas avenue, Topeka, Kansas, as his successor to the Vice Presidency for Kansas of the N. A. B. K. Society.

A. J. COOK, *President.*

☞The Southern California District Bee-Keepers' Association will hold their annual Convention in Union Hall, Los Angeles City, Oct. 19, 20, 1882, during the week of the Agricultural Fair. The Convention promises to be of so much interest that no bee-keeper should miss it. Ladies are pressingly invited to attend.

J. E. PLEASANTS, *Pres.*

☞The Tuscarawas Valley Bee-Keepers' Association will hold their next meeting in Wilgus Hall, Newcomerstown, O., on Tuesday, Oct. 10, instead of Oct. 5th. This change is made in order to allow members to visit the National Convention at Cincinnati. J. A. BUCKLEW, *Sec.*

☞The N. W. Bee-Keepers' Association of La Crosse, will meet in the City Hall in La Crosse on Friday, Oct. 13, 1882. All interested are invited to be present. G. J. PAMMEL, *Sec.*

SELECTIONS FROM OUR LETTER BOX

Washington Bower.—I send you a small piece of vine called Washington bower, which blooms from early spring till late in the fall. The bees work on it from morning till night, and on the blossoms two or three days old as well as on the new ones. I would like to have your opinion about whether it is very good for the bees or not? It is an ornamental vine, and many people have it running on their porches. Good luck to the BEE JOURNAL. MARVIN M. BINKLEY.

Sherman, Tex., Sept. 23, 1882.

[We do not think bees work on Washington bower to any extent in the North—at least we have never been able to discover them on it. It is possible that in some latitudes, and under certain atmospheric influences, it may afford a bountiful supply of good honey, while under others it would not. We know that this is true of buckwheat, and perhaps many other plants.—ED.]

Quizzical.—Will you be kind enough to answer me two questions: 1. Would you advise a beginner in bee-culture to make artificial swarms or divide his bees for increase in the time of apple bloom without any regard to the state of the weather or condition of the colony? 2. If not, then, how could you advise Mr. J. M. Foote, of Creston, Iowa, as you did on page 587 of the BEE JOURNAL of Sept. 13, 1882? I know by sad experience that that is "bad medicine" for a beginner. Mr. "Heddon's system" is very nice for one who is backed up by a comb foundation and wire factory, providing the weather is fine and the bees are "booming," otherwise it is not advisable. Please rise and explain.

OLEFOGY.

Allendale, Ill., Sept. 26, 1882.

[1. We supposed when that advice was given that there was but one man in the country (yourself) who would be foolish enough to divide during apple bloom, or any other time, if the weather was not favorable, or the bees strong enough to divide with safety, and he had probably learned better by "sad experience."

2. We never advised the use of wired foundation in transferring, nor for other purposes, but we did advise the "progressive method of transferring," as pursued by Mr. Heddon.

Our correspondent is inclined to be quizzical, and in order to force a point, seems to assume that it is impossible to get good transferring weather during apple bloom, or to adopt Mr. Heddon's method without using his or a similar material.—ED.]

Extraordinary.—That honey wave is gone, except some coming in from asters. I commenced the season with 19 colonies, which have increased to 56, and have obtained 2,000 lbs. of comb and extracted honey, with as much more to take off. O, how they fight when I open a hive! I have tried the Italian and Cyprian side by side this season, and, all things considered, the Cyprians are the best; at least the cross between the two races is good enough. WM. MALONE.

Oakley, Iowa, Sept. 22, 1882.

[Over 200 lbs. per colony spring count, and more than 150 per cent. increase. Who can beat it, averaging the apiary through? We have no doubt it has been done, but would like for them to "rise and explain."—ED.]

Quantity and Quality Excellent.—Our honey crop has been very good in quantity, and excellent in quality this season, although the honey flow came very late. August was the busy month with willing workers. Our fall honey crop is never so great as in some localities, as we have not the abundance of goldenrod.

WM. WAKEFIELD.

St. Paul, Minn., Sept. 22, 1882.

Hanging Frames. — Why are not small hanging frames used for surplus honey, or, if they have been used, what was found to be the objection? It seems to me their advantages would be great. We could see just what combs would do to take out at a glance and could take them out without in any way disturbing those that were not capped, or had brood in them. They would be filled more readily, as hanging immediately over the brood frames they would seem to be but a continuation of them, and practically there would be not the least obstruction to the bees getting up to them. I mean to have them of the same width of the brood frames, *i. e.*, ⅞ inch, and quite shallow, so that honey would naturally be stored there. Please answer in next issue of Bee Journal.

G. M. Alves.

Henderson, Ky., Sept. 21, 1882.

[The objection to their use would be the liability of the queen to make a brood-nest of the second story as well as the first. We have, the past summer, frequently seen three-story Langstroth hives, which were being manipulated for extracted honey, wherein several frames in the upper or third story contained brood, larvæ and eggs; and your device would be subject to the same annoyance. Of course this would depreciate the value of the comb honey produced in them if intended for a general market, as they would not only be more or less filled with pollen, but wherever young bees had been reared the combs would be discolored and unsightly.—Ed.]

Meaning of Terms.—Will you please tell me the meaning of the terms "foul brood" and "nuclei"? I am a novice in bee-culture, but the more I learn, the deeper I become interested.

John L. Vredenburgh.

Austin, Texas, Sept. 18, 1882.

[Foul brood is a malignant, contagious disease, which destroys the brood of a colony of bees. Nuclei is the plural of nucleus, and is used to denote a miniature colony of bees.—Ed.]

A Continuous Season.—The honey season is over with us. The drouth and frost have stopped the growth of all honey-producing plants. When I review the past 6 years, I am sure the present has been fully equal to the best. From about the 16th of June to the 15th of Sept., we have had one continuous flow of honey, with the exception of a day or two at a time. During this period we have had several honey-dews, which covered the leaves of the trees so thickly that it ran down and dropped from their points, besmearing one's clothing in passing through the timber. Frames of foundation placed in the middle of a colony with brood on each side would be drawn out and filled with honey before the queen could lay an egg in them. On the 2d of Sept. I made two new colonies from 2 strong ones, giving each one frame of brood and one frame of honey, and filled out the hives with frames of foundation. On the 15th of Sept. I opened the hives and found that the foundation had been drawn out, filled with honey, and the most of it was sealed over. There was even less brood than when the colonies were made. Still, both queens were young and vigorous. The honey extracted during this time is very thick, and has a pleasant flavor. It is thought by some to be better than that taken while basswood was in bloom.

J. L. Strong.

Clarinda, Iowa, Sept. 22, 1882.

Queen Overlooked.—I purchased a small lot of bees and added them to a colony; about 2 days afterward I found a queen on the ground near the hive. I looked at them, at intervals for about two weeks, finding no queen, but brood in various stages. I grafted in a queen cell, and next morning found a dead queen on the ground. 1. Why was this? From another colony I removed the queen. Eight or nine days after I caged an Italian queen on a frame having some brood, letting her remain 48 hours. Seven days after I could not find her, but later in the day noticed a cluster of bees on the outside of a screen to prevent robbing. I brushed the bees away, and there was my queen dead. 2. What was the matter? I have lost 6 fine queens in attempting to introduce them.

H. J. Northrup.

Lansingburgh, N. Y., Sept. 18, 1882.

1. There was a queen in the small lot of bees you added, which was killed by the bees or queen in the hive, and which you overlooked afterward.

2. The robbing and confusion incident to the wire screen frightened the bees and queen, and in her efforts to abandon the hive, and their attempts to retain or protect her, she was killed.—Ed.]

Do Bees Spread the "Yellows?"—There is considerable agitation among fruit men in this State in regard to whether bees spread the yellows in peaches. Would like to hear from Prof. Cook on the subject. Bees are doing well here, and very strong.

T. O. Shearman.

New Richmond, Mich., Sept. 14.

Crop Reports.—To date I have taken off 23,100 lbs. of extracted and 500 lbs. of comb honey from a commencement of 256 colonies. I expect to extract about 300 lbs. more. Mr. G. C. Vaught to date has taken off 3,045 lbs. of comb and 1,270 lbs. of extracted honey, and expects to take off 1,000 lbs. more of comb honey, all from a commencement of 39 colonies. Mr. Wm. McLendon, of Lake Village, Ark., whom I visited Aug. 20th, had extracted 7,500 lbs., and taken 110 lbs. of comb honey from a commencement of 70 colonies. Mr. Robert Adams, near Lake Port, Ark., at the same date, from 3 colonies to commence with, had extracted 588 lbs., and taken 72 lbs. of comb honey. What the expectations of my Arkansas friends are I cannot say, but they are sanguine of a heavy yield. I will send you a report in full in the winter of all the apiaries in my neighborhood. The North American Bee-Keepers' Society meets in convention too soon for a full report from Southern bee-keepers.

O. M. Blanton.

Greenville, Miss., Sept. 21, 1882.

Removing Colonies.—It is necessary to remove my colonies before I pack for winter, to a yard 200 feet distant. They must be taken from one place to the other direct. 1. What is the best manner to remove them? 2. When is the best time? 3. A good deal of drone comb is in the frames the bees are to winter on. What should I have done, and what can I do?

James Gardiner.

Paris, Ont.

[1. Carry them on a hand-barrow.

2. Remove them at once, slanting boards in front of each to cause them to mark their location anew.

3. If filled with honey, let them remain; if not, remove them when packing, or before.—Ed.]

Finishing Up.—On the morning of the 22d inst. we had a light frost, but at 2 o'clock p. m. the bees were working busy as ever. This morning a second and heavier frost occurred, which will stop bee-work to some extent. Bees have done well here this summer. I hope mild weather will prevail a few days to finish off unfinished combs. My crop will reach 4,000 lbs. from 48 colonies last spring.

T. N. Marquis.

Woodland, Ill., Sept. 24, 1882.

Swarming. — Seeing a statement written by Joel Brewer, and one from Daniel Whitmer, on page 555 of the Bee Journal, moves me to write for their benefit, and others (if they wish to try it), my success for five years consecutively. When spring comes I commence to build up, and get large colonies to be ready for the honey season. If my colonies are not strong enough when that time comes, I double them until the desired strength is reached. Now comes the time to be on my guard. When one shows signs of crowding the queen, which will be when mock queen cells are being built rather plentiful, with here and there an egg placed in them, I procure another hive, and filling it with empty combs, place it under the colony. The vacant space being below, and heat always rising, the colony receives no injury from chilling. This method has never failed with me, and I can refer to 5 bee men besides myself who practice it with success. I use a hive 2 feet long and one foot wide, by 14 inches deep. The frame is 11x13 inches, outside measure, and I keep none but pure Italian bees. In five years' use of the above method, I have

never had a swarm issue, and I have had large colonies that filled three of these hives tiered one above another, always putting the empty one below. When extracting, I would take off the brood nest and extract the lower hive. I have procured hundreds of pounds from a single colony by this method. I never clip a queen's wing, and would as soon go visiting during the height of the honey and swarming season as any other time, for I feel that my bees are safe. I do not ask bee-keepers to take for granted what I say, but try one colony this way, being sure to prepare in time. W. S. BAIR.
Rollersville, O., Sept., 17, 1882.

Bitter Honey.—I observed in the BEE JOURNAL of Sept. 6, page 568, that E. P. Massey, of Waco, Tex., has some bitter honey from the wild camomile. I do not know whether it will act like the bitter honey from the tulip tree, or not. We often get that so bitter we cannot use it, but if kept 6 or 8 months the bitter taste has always left it. The sweet I suppose neutralizes the bitter. My bees are now and have been for some time doing well, for this country and time of year. They done well in the spring and fore part of the summer, then fell back and consumed nearly all of their stores and stopped breeding, until the plant I send you for name came into bloom, which was about 8 weeks ago, and some of which is yet in bloom. There was, I think, 1,000 acres of it within range of my apiary. My bees worked upon it until corn and other flowers came into bloom. I also send a second flower that grows here in great abundance, and blossoms in May and June. J. H. CHRISTIE.
Dyersburg, Tenn., Sept. 11, 1882.

[The first of the flowers is *Rudbeckia fulgida*, one of the purple cone flowers. This is a Southern species, scarcely reaching farther north than Kentucky. Grows on dry soil.

The second, *Penstemon digitalis*, is a beautiful plant, related to many of our showy cultivated flowers, among others the snapdragon. It is also southern in habitat, from Virginia and Southern Illinois downward. The whole group to which it belongs (*Scrophulariaceæ*) are prominent honey plants.—T. J. BURRILL.]

Conundrums.—I had a swarm of black bees June 9th, and hived them in a hive full of empty combs, putting on 21 prize boxes, and have now taken from them 35 pounds of honey. They are now, however, changed to pure Italians without introducing any queen to them. How did it happen? I sent for 2 Italian queens and introduced them to black colonies, which are also changed to Italians. The first queen was introduced July 3d, and swarmed on the 14th, and that colony swarmed on Sept. 3d. It was a very large one, and was hived on one frame of empty comb and 9 frames of wired foundation. They are very strong and heavy; I think the bees and honey will weigh 25 or 30 pounds. 2. Do you think they will winter safely? WM. ROBERTS.
Vaughansville, O., Sept. 23, 1882.

[1. Either the swarm did not come from a black colony, or an Italian queen has by some means gained ingress to the hive, and destroyed the black queen.

2, If well supplied with matured young bees and 25 or 30 pounds of good honey, we do not know why they should not winter as safely as any. The weather since Sept. 3d has been excellent for breeding.—ED.]

Working Nicely.—The weather is warm at this time, and bees are working nicely on goldenrod. If the weather continues warm a few days longer I shall have to extract to make room for the queens. R. DOWNS.
Naugatuck, Conn., Sept. 20, 1882.

Honey Dew.—Inclosed find some beech leaves, which I obtained from the woods near here, and of which there is a great abundance in the same condition. Is the sticky substance on these leaves the so-called honey-dew, or what is it? There were no bees on them at the time I found them, which was late in the afternoon.
S. P. NEWMAN.
Norwalk, O., Sept. 15, 1882.

[It is undoubtedly the same. There are times, and when gathered may have been one of them, when this substance does not possess the same sweetness as at others, and hence was not liable to attract the bees.—ED.]

Most Remarkable in 30 Years.—The season in this section for bee-keeping has been the most remarkable I have known in my 30 years' experience. Bees came through the winter in fine condition, but when they went abroad for honey they found the flowers scarce, and what few there were secreted but little honey. Where large lots of bees were kept together, they had to be fed up to July 4th, and in some localities should have been fed later. Swarming was very light, as in the yard that I worked, containing 150 colonies, only about 40 swarms, and all were returned but 2. The small crop of honey that I obtained (3,000 or 4,000 lbs.) came from basswood, and was gathered in less than a week. All have a good supply for winter, which has been gathered from fall flowers. In some sections in this county bees are in a starving condition, and some large apiaries do not number one-half what they had in the spring. As the question of how to winter bees is one of the most perplexing in bee-keeping, I will at some future time give the readers of the BEE JOURNAL my method, which has never failed in 20 years with large lots, whether hot or cold. I have not time to give it now, but will say that all that is necessary is a warm cellar.
IRA BARBER.
DeKalb Junction, N. Y., Sept. 23.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eigh words**; fourteen lines will occupy 1 inch of space Transient Advertisements payable in advance.
Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisemen published WEEKLY as follows, if the whole paid in advance:

For **4** weeks		..............**10**	per cent. discoun	
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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ The American Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2**,—"Bees and Honey," in paper.
" " **3**,—an Emerson Binder, or "Bees and Honey," in cloth.
" " **4**,—Apiary Register for 50 Colonies, or Cook's Manual, paper.
" " **5**,—Cook's Manual, in cloth, or the Apiary Register for 100 Colonies
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Two subscribers for the Monthly will count the same as one for the Weekly, when getting up clubs for the above premiums.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly is now permanently established, and will be continued as heretofore.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞ New subscribers for the Weekly BEE JOURNAL for 1883, can obtain all the rest of the numbers for this year by sending $2 to this office.

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal, ...	$2 00..	
and Gleanings in Bee-Culture (A. I. Root)	3 00..	2 75
Bee-Keepers' Magazine (A. J. King).	3 00..	2 60
Bee-Keepers' Instructor (W. Thomas)	2 50..	2 35
The 4 above-named papers.......	4 50..	4 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A. G. Hill)......	2 50..	2 35
Kansas Bee-Keeper........	2 60..	2 40
The 7 above-named papers.......	6 30..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881...............	2 85..	2 75
Binder for Weekly for 1882..........	2 75..	2 50

The Monthly **Bee Journal** and any of the above, $1 less than the figures in the last column.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

☞ Articles for publication must be written on a separate piece of paper from items of business.

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

☞ When changing a postoffice address, mention the *old* as well as the new address.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ Hundreds of clergymen, doctors and others have used Kendall's Spavin Cure with the best success. 37w4.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., October 2, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 16@20c. on arrival; extracted, 7@10c. BEESWAX—Firm at 20@25c. per lb.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand is good for choice white comb honey in 1 and 2 lb. sections, and prices are without material change, 18@20c. being the range of this week's sales. White extracted, in cans, 10@11c., in kegs and casks, 10c.; dark, 9@9½c. Dark comb honey, 12½@16.

BEESWAX—Yellow, 26c.; dark, 18@22c.

R. A. BURNETT, 165 South Water St.

CLEVELAND.

HONEY—Sells very readily in 1 lb. sections at 21@22c. for best white, and 19@20c. for 2 lb. Second grade, 1 lb. 19@20c. Extracted is selling very slowly again, and some arrivals in bbls. we have been unable to place, asking 11@12c. Extracted in tin pails has sold slowly at 14c.

BEESWAX—25@28c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—Receipts were liberal this week, but the bulk of arrivals were in transit to other markets. There is a good inquiry, and prices are firm for fair to choice extracted, and for choice comb. Dark or otherwise inferior comb is not easily placed.

We quote white comb, 18@20c.; dark to good, 12@15c. Extracted, choice to extra white, 8½@9½c.; dark and candied, 7½@8c. BEESWAX—28@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Plentiful and dull. Comb lower, at 16@18c—latter for choice white clover in small packages; strained in round lots at 7c.; extracted in cans at 9@10c.

BEESWAX—Sold fairly at 27c. for prime.

R. C. GREER & CO., 117 N. Main Street.

NEW YORK.

HONEY—No quotations reported.—ED.

BEESWAX—The stock continues light, and prime Southern held up to 30c., with little if any obtainable below 29c. Western, pure, 28@29c; Southern, pure, 29@30c.

D. W. QUINBY, 105 Park Place

BOSTON.

HONEY—Market active. We quote ½ lb. combs 30c. per lb.; 1 lb. combs 22@25c.; 2 lb. combs 20@22c. Extracted, in half bbls., 12@14c.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

Kendall's Spavin Cure is used from the Atlantic to the Pacific coast.
40w4t

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation to every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

NOTICE.

As I do not sell honey on commission, and buy only such kinds as I need in my line of trade, I cannot accept any shipments without previous correspondence.

I can sell Beeswax of any quality, and will pay the regular market price for it, in any quantity, or exchange for it comb foundation, without previous correspondence.

ALFRED H. NEWMAN,
40wtf 923 West Madison Street, Chicago, Ill.

GERMAN CARP,

For stocking ponds, Goldfish, Silver Pearl, Fringe Tails, Golden Orfes, etc. For particulars, address

MUTH & ECKARDT,
37w8t Mt. Healthy, Hamilton Co., O.

HEADQUARTERS FOR THE

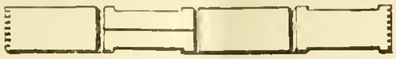
Golden Italians & Original Albinos,

BEES AND QUEENS.

Send for Circular. **J. M. C. TAYLOR,**
10smtf Lewistown, Frederick Co., Md.

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

SECTIONS.



We make a specialty of our "Boss" One-Piece Sections. Patented June 28th, 1881. We have not sold any right to manufacture, therefore we caution the public against buying any One-Piece Sections not bearing our stamp. Send for Price List.

JAS. FORNCROOK & CO.
Watertown, Jeff. Co., Wis., Sept. 1, 1882. 36m5t

1882. JOSEPH D. ENAS, 1882.
(Sunny Side Apiary,)

Pure Italian Queens,

BEES, COLONIES, NUCLEI,

Extractors, Comb Foundation, etc.

Address, **Sunny Side Apiary,**
9m8t Napa P. O., Cal.

ALFRED H. NEWMAN,

Dealer in all kinds of

APIARIAN SUPPLIES,

AND

HONEY AND BEESWAX,

923 West Madison Street,
CHICAGO, ILL.

MY ILLUSTRATED CATALOGUE
sent FREE upon application.

EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book.

☞ For sale at the BEE JOURNAL Office. ☜

AGENTS WANTED to sell Dr. Chase's 2,000 Recipe Book. *Sells at Sight*, Double your money Address Dr. Chase's Printing House, Ann Arbor, Mich
38m1yp

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited and published by

C. N. ABBOTT, Bee-Master,
School of Apiculture, Fairlawn, Southall, London.

☞ We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 per annum.

SWEET CLOVER SEED,

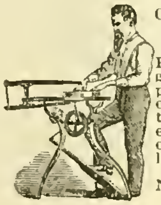
This year's crop, all of the white variety, 28c. per pound; $3.75 per peck; $10.00 per bushel.

☞ I can fill no more orders for Queens this fall, having sold all I had to spare, leaving many orders unfilled, and with orders still coming in. The advertisement in the Weekly Bee Journal did it.

I. R. GOOD,
5w1y Nappanee, Elkhart Co., Ind.

BARNES' PATENT

Foot Power Machinery



CIRCULAR AND
SCROLL SAWS,

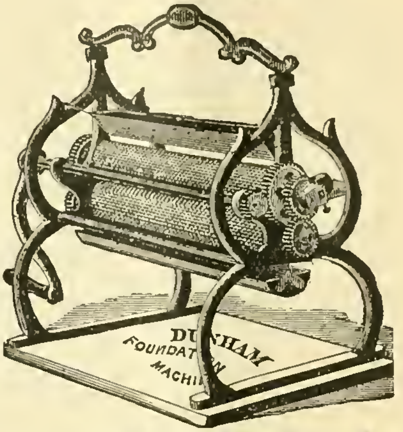
Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill.

FRANCES DUNHAM,

Inventor and Sole Manufacturer of

THE DUNHAM



FOUNDATION MACHINE.

Patented Aug. 23d, 1881.

☞ Send for New Circular for January, 1882.

CAUTION.

Having obtained LETTERS PATENT Number 246,099 for Dunham Foundation Machine, making comb foundation with base of cells of natural shape, and side-walls brought up to form an even surface; also on the foundation made on said machine, I hereby give notice to all parties infringing my rights, either by manufacturing said machines or foundation, as well as to all parties purchasing machines as above, other than of my manufacture, that I am prepared to protect my rights, and shall prosecute all infringements to the full extent of the law.

FRANCES A. DUNHAM,
23m4t DePere, Wis.

HEADQUARTERS IN THE SOUTH

For the manufacture of

BEE-KEEPERS' SUPPLIES.

Dunham and Root Foundation a specialty. Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
5mtf **PAUL L. VIALLON,** Bayou Goula, La.

C. Olm's Comb Foundation Machine.

☞ Send for Sample and Circular.
18mtf **C. OLM,** Fond du Lac, Wis.

Friends, if you are in any way interested in

BEES OR HONEY

We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to A. I. ROOT, Medina, O.

Fruit Evaporators,

To be used on a common cooking stove, capacity 3 to 5 bushels per day. Price, complete, $10; in the flat, partly put together, for $6. A few agents wanted. For particulars and prices for Evaporators, Queen Bees, etc., address

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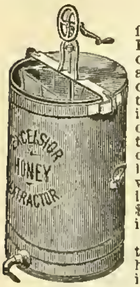

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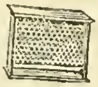

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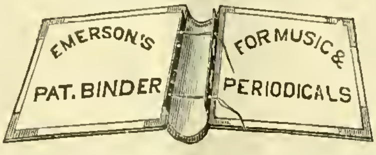

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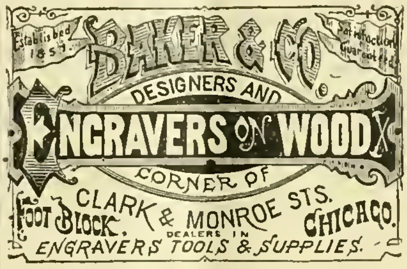

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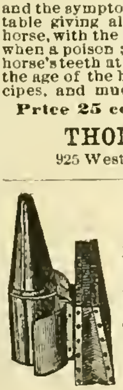

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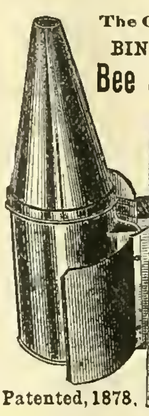

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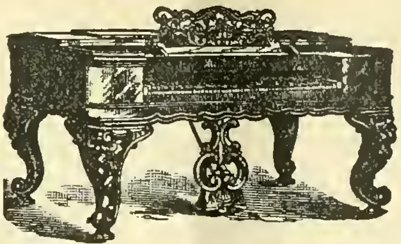

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—Third Edition. "Fully up with the times," including all the various improvements and inventions. Chief among the new chapters are: "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. It contains 160 pages, and is profusely illustrated. Price, bound in cloth, **75c.**; in paper covers, **50c.,** postpaid.

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Wintering Bees.—This contains the Prize Essays on this subject, read before the Centennial Bee-Keepers' Association. Price, **10c.**

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, and instructions on the exhibition of bees and honey at Fairs, etc., by T. G. Newman. Price **10c.**

The Hive I Use—Being a description of the hive used by G. M. Doolittle. Price, **5c.**

Extracted Honey; Harvesting, Handling and Marketing.—A 24-page pamphlet, by Ch. & C. P. Dadant, giving in detail the methods and management adopted in their apiary. This contains many useful hints.—Price **15c.**

Bee Pasturage a Necessity, by Thomas G. Newman—Giving advanced views on this important subject, with suggestions what to plant, and and when and how: 26 engravings. Price, **10c.**

Practical Hints to Bee-Keepers, by Chas. F. Muth; 32 pages. It gives Mr. Muth's views on the management of bees. Price, **10c.**

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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.................................... 641
Honey Show at Stratford, Ontarie.......... 641
Healthfulness of Honey........................ 642
Wintering Bees 642
Wire Frame Holder 642
Bees still working on Sweet Clover 642
Feed no Glucose to Bees....................... 642
The Northwestern Coovention............... 642

Convention Notes—

Local Convention Directory.................. 643
Ontario Bee-Keepers' Convention 643
Prize Essay on Wintering Bees 644
The National Convention...................... 646
  Our Honey Market 646
  President Cook's Address 646
  Foul Brood...................................... 647
  Too Late... 648
Convention Notices.............................. 648

Correspondence—

Apiarian Salmagundi............................ 649
Poisonous Gases around Bee Hives....... 649
Glucose Detective................................ 649
Some Hints about Coovections 650

Selections from Our Letter Box—

Good work in Extracting........................ 650
My Third Annual Report 650
A Scotch Beekeeper in Texas 650
Bee and Honey Show in London, Ont 651
That Champion Colony 651
A Good Profit 651
Bees have done fairly 651
Position of pure air in rooms................ 651
Botanical 651
From Minnesota.................................. 651
Good Report from Michigan... 652
Bees still gathering Honey 652
A Tremendous Report 652
Seed of the Golden Honey Plant........... 652

Business Notices—

MONTHLY BEE JOURNAL FOR 1883........ 652
Premiums 652
Clubbing List....................................... 653
Honey as Food and Medicine 653
Honey and Beeswax Market................ 653
The Apiary Register............................. 653

Honey Show at Stratford, Ont.

A correspondent writes us as follows, concerning the recent honey show in connection with the Agricultural Fair, at Stratford, Ontario, Canada:

The efforts of the BEE JOURNAL are bearing fruit in the increased attention and interest taken in the gentle craft of bee-keeping. As a rule, the display of honey at the agricultural shows in Canada has been confined to a jar or two of thick looking stuff, and a couple of boxes of comb honey, which are sandwiched in between some dirty looking grape sugar, and three or four cakes of home made soap. The display made by Mr. Jones at Toronto, the past year or two, has enthused local apiarists all over the country, and if the directors of the County Fairs only act decently, the show of bee products may be made a prominent feature.

At the County of Perth Exhibition, held at Stratford, Ont., last week, Mr. D. Chalmers, of the Honey Grove Apiary at Musselburg, occupied quite a large display, his tempting goods being arranged in glass bottles, pound sections and Jones honey pails with gorgeous labels. He drove quite a thriving business, and carried off the first prize for section, and the second for extracted honey. He also displayed to wondering crowds a full supply of almost everything used in the honey business.

Dr. Shaver, of Stratford, an enthusiastic apiarist, devoted himself entirely to comb honey, having a pyramid of several hundred one-pound sections, graded according to the source of supply—the clover, thistle, basswood, goldenrod, etc., being clearly distinguishable from the color.

Mr. Young, an amateur of the first year, captured the first prize for extracted honey. The fall flow here has been immense, and the yield a large average.

☞At the recent Fair at Hamilton, Ont., there was a very good exhibit of hives, bees, honey and apiarian supplies. The first prize for bees was awarded to Mr. A. Robertson, of Carlisle; 2d, to Rennie Bros., of Hamilton; 1st for hive to Mr. McEvoy, Woodburn; 1st for comb honey to Mr. McEvoy; 2d to Mr. C. Marshall, Binbrook; 1st for extracted honey to Mr. McEvoy; 2d to C. Marshall. The bee-keepers on the ground met and formed themselves into the Wentworth, Ont., Bee-Keepers' Association, with the following officers for the first year:

1st Prest., J. M. Knowles, West Flambro; 2d Prest., J. H. Cornell, Lynden; Treas., A. Robertson, Carlisle; Sec'y, Geo. N. Henderson, Hamilton. The meeting adjourned to meet on the first Saturday in November at the Dominion Hotel, Hamilton; 20 members were enrolled.

☞At the Baltimore Fair there was an exhibition of bees, honey and apiarian equipments. Under the superintendency of Mr. Charles H. Lake, there was a special tent for the display and manipulation of bees, etc., and all bee-keepers were invited to join in making an effective and attractive display. We hope they did so, but as yet we are not informed on the subject.

☞The Rev. W. F. Clarke's address will hereafter be Winnepeg, Manitoba, to which place he has removed to take editorial charge of the Winnepeg *Sun*. The BEE JOURNAL extends congratulations.

A Test for Honey.—In Prof. Maher's article on this subject on page 610, an error was made, which needs correction. In the fourth line of the third paragraph read "weak" for *white*, thus: "with a weak solution," etc.

Healthfulness of Honey.

Pliny, the Roman historian, speaks of Rumilius Pollio, who possessed marvelous health and strength, at over 100 years of age. Upon being presented to the Emperor Augustus, who inquired the secret of his liveliness of spirits and strength of body at so great an age—he answered: "*Interus melle*; *exterus oleo*"—Internally through honey; externally through oil.

Pure honey should be used unsparingly by every family. It is no longer a luxury to be enjoyed only by few, but it is sufficiently cheap to be within the reach of all. It has properties which make it a valuable food. It differs from alcoholic stimulants, which dull the intellect—on the contrary it produces a bright intellect as well as a healthy body. Children are very fond of honey, and one pound of it goes further than a pound of butter. It has the peculiarity of keeping good, while butter often becomes rancid, and injurious to health.

The bees gather the honey from the juices of healthy plants, shrubs and trees, and the nectar so gathered is, therefore, the pure sweet, as it comes from the hand of the Creator. We therefore strongly advise every family in the land to place honey on the table for daily use; make cakes, cookies, ginger bread, pop-corn balls, etc., with it, and give it to the children, imparting to them health of body and strength of mind, instead of using the unhealthy, adulterated syrups which now so commonly deal out death to the "little ones," desolating almost every household and hanging the black pall of mourning over the world.

Feed no Glucose to Bees.—The Cincinnati *Grange Bulletin* in its last issue gives the following warning against feeding bees with glucose:

> We have at all times condemned the use of glucose as a feed for bees, believing as we do, from a long experience, that its use is pernicious to the welfare of all bees that may be attempted to be wintered on it; hence we say do not try to feed your bees with the pernicious stuff (glucose).

☞ Candy pulls are in fashion, but they are now called "glucose tentions."

☞ Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

Wire Frame Holder.

We have received from E. H. Thurston, M. D., of Hagerstown, Ind., a very simple device for holding frames, which can be fastened to the side of the hive. It can be attached or detached in a moment, and will be found very convenient. It is placed in our museum, and the following description of it by Dr. Thurston is quite complete, and will give a good idea of it:

> Dear Editor—I send you, by mail, a wire frame holder. This arrangement is of my own getting up. While working with my bees, I often had to remove all the frames, and I was troubled to find places to put them, when I was looking for the queen. During one night I was wakeful and thinking of my bees, when the idea of a frame holder came to me; next morning I put my plans into execution and a wire holder something like the one I send you was the result. I tested it and on Tuesday I went to Cincinnati, Ohio, to attend the North American Bee-Keepers' Convention, and took my holder with me. It met the approval of Messrs. A. I. Root, I. R. Good and many others who examined it; all thought it good. On my return I improved it, as the one sent you to-day. The holder can be fastened to any hive. If there be no projection to fasten it to, you can screw two small blocks on the hive to receive the horizontal bars. This holder will hold 5 frames; they may be made to hold more. The cost of the holder will not be more than 10c; and any one can make them. I use two pieces of wire, 20 inches long, to make each bracket, and 2 pieces of wire 11 inches long to make the side hook braces. When the holder is put on and the sharp ends of the top bar pressed tightly into the wood and side hook bars well fastened you will find it will be very solid and will hold to its place. The holder might be made of wire about one or two sizes larger. There is no patent on it, nor shall there be. I wish to give a description of it in the Journal so that every bee-keeper may have the advantage of it. Any one can make them, and I think all who use them will find them very convenient.

☞ As the time for the usual winter rush of correspondence is nearing, let us try to impress on our correspondents the necessity of being careful when writing to this office. If they live near one postoffice and get their mail at another, be sure to give the address we have on our list.

☞ The Detroit *Free Press* man must have been there. He says: "The sting of a bee is really only one-eighth of an inch long, imagination makes it seem as long as a hoe handle."—*Exchange.*

Bees still Working on Sweet Clover.—Mr. Julius Tomlinson of Allegan, Mich., writes us under date of Oct. 6, 1882, as follows: "The weather here is very warm and has been very dry, but Thursday we had a fine rain. My bees are working on sweet clover now." Bees are still working on it in Chicago, and will do so, for many weeks to come, if it is warm enough for them to fly.

☞ The California *Apiculturist* for September, referring to the remarks of the Bee Journal concerning the uses of drones in the hive, and suggesting that they may nurse the young bees, increase the heat in the hive, etc., remarks as follows in a jocular way: "It is said by some naturalists that drone bees are a slandered race, that they are not idlers, but nurse and take care of the baby bees. Can as much be said of old bachelors?"

☞ The Northwestern Bee-Keepers' Convention will be held at Chicago, on Wednesday and Thursday, Oct. 18 and 19, 1882. By a notice on page 650 it will be seen that Dr. Miller, the president, has discovered an error in the date previously announced. Let all take particular notice, and be prepared to attend and partake of the "feast of reason and flow of soul," there to be enjoyed. The place of rendezvous will be at the office of the American Bee Journal, where the hotel arrangements and place of meeting will be made known.

Wintering Bees.—As this subject is now a very seasonable one we present the Prize Essay on wintering bees, by Mr. Clouse, in this issue. In our next we expect to give an illustrated article by Mr. James Heddon on the same subject.

☞ Just as we go to press, we are informed by the Secretary of the National Convention, Mr. A. I. Root, that he will furnish us the Official Report in time for the next number of the Bee Journal.

Sample Copies of the American Bee Journal will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

☞ Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

13—N. W. of LaCrosse, at LaCrosse, Wis.
G. J. Pammel, Sec., LaCrosse, Wis.
18, 19—Northwestern, at Chicago, Ill.
C. C. Coffinberry, Sec., Chicago, Ill.
18, 19—Southern California, at Los Angeles.
J. E. Pleasants, Pres., Anaheim, Cal.
21—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec., Norwalk, O.
Nov. 1—New Jersey & Eastern, at New Brunswick.
J. Hasbrouck, Sec., Bound Brook, N. J.
3.—Iowa Central, at Winterset, Iowa,
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Ontario, Canada, Convention.

The Ontario Bee-Keepers' Association was held at Toronto on Sept. 13, 1882. Hon. Louis Wallbridge in the chair.

The Secretary's report was read and adopted. It showed 116 members, and balance in hand of Treasurer of $27.25.

The President said that the committee, consisting of himself, the Secretary and Mr. D. A. Jones, had applied to the Government for incorporation and a money grant. The Government seemed favorable to an Act of incorporation, but hesitated on the point of a grant.

The President's address was then made, in which he said that he took a real pleasure in bee-keeping apart from the profit. The study of the habits and development of bees was most instructive and elevating. They were excellent instructors in mathematics, and set an excellent example in social economy. The honey display at the Exhibition this year was not quite up to the usual mark, owing to the very unfavorable season.

His method of wintering bees, he said, had been tested by him and found good. He used the Langstroth hive with nine frames. He never interfered with the brood nest in the spring, when he removed certain combs to insure breeding. He confined his honey raising operations to the filling of boxes; he did not remove frames. For wintering he removed all the boxes and honey boards, and stripped everything down to the comb-frames. With a coarse fabric he formed quilts and cushions, with which he carefully protected the hives. These he piled one above the other in his cellar, keeping them apart with small battens, and covering each separately with a piece of cloth so as to afford each colony space to walk up the sides of their own habitation. This separation secured proper ventilation and dryness, and was absolutely necessary in cellar wintering for the safe and healthy preservation of bees.

In reply to a question, he stated that he gave no top ventilation except through the quilt. The moisture passed through the quilt and evaporated on the top. The great principle was to keep in the heat and let out the moisture.

D. A. Jones was of the opinion that the whole secret of wintering was to have plenty of young bees, plenty of stores, together with with plenty of heat and ventilation. The great danger was the generation of carbonic acid gas. In one instance he had found a stratum of this gas in his cellar to the depth of six inches. As carbonic acid gas was heavier than the atmosphere, and consequently sunk, it was most important to elevate the hives a little and have proper bottom ventilation.

The PRESIDENT said that in his cellar the gas generated was carried away by a small stream of water. His hives were also raised slightly from the ground.

Mr. W. C. Wells explained how he had applied a stove to secure proper heat and ventilation. He let off the noxious gas through a tile, like water.

Dr. Shaver, of Stratford, thought the cushions or quilt should be filled with sawdust six inches deep. Proper ventilation would remove the carbonic acid gas. The opening of the doors and windows was sufficient. The colonies should be ventilated from either above or below. He agreed with the President about stacking the hives one above the other separated by small stakes. He never took out his bees untill the first of May. Early moving in the spring caused the queen to begin laying before the weather was warm enough, and bad consequences were sure to follow.

Mr. Jones found by weighing that during winter his colonies consumed about five or six pounds of honey. Soft maple blossoms were of great value to bees in spring, perhaps about the 1st. of April.

Thos. Forfar considered the bottom ventilation an absolute necessity, as the carbonic acid gas, being heavier than air, sunk to the bottom.

C. R. Trench, of New Market, was convinced that ventilation is required both at top and bottom. He had been very successful in wintering, and he adopted measures to secure this kind of ventilation. He considered dry sawdust packing of the greatest value both in summer and winter. In summer it kept out the heat, and in winter the cold. He considered feeding in the winter a very bad expedient. He did not think chaff as good as sawdust, especially on top, where it got all matted together. It might do at the sides. The sawdust packing prevented the deceitful warming up of a wintry sun, which sometimes lured bees outside to meet death from cold. He used sawdust to the depth of four inches and left his hives thus protected all winter. He had not been successful either in cellar or bee-house wintering, but had been quite successful when he left the hives on the summer stands.

Mr. McKnight said that it appeared that every one considered the way which he found successful, the right way. He proceeded to describe experiments he had made in bee-house, cellar, and outside wintering. He had uniformly met with success by all methods, and therefore he concluded that there must be several right ways. He used different kinds of hives, but gave preference to the Thomas hive for wintering, owing to the depth of the frame. He had found for packing purposes ground cork better than sawdust, chaff, or any thing else. He thought a good transmitter rather than a good absorbent was what was required on the top of hives.

SECOND SESSION.

In the absence of the President, Mr. Corneil Lindsay was called to the chair.

Mr. Woodward asked what was the best method of introducing a new queen late in the season.

Mr. Corneil formed a cage of wire-cloth with an open side, which he placed on the combs. The queen, thus protected, took a deep draught of honey, and then set about her proper business. In a short time a young brood surrounded her, and she felt quite at home.

Mr. Jones took a piece of wire-cloth and formed it into a box without a lid. He cleared a piece of comb, placed the queen on it, and then covered her with the wire-cloth box. In a short time the bees gnawed through the comb and liberated the captive. The operation was then complete. He had also successfully introduced a queen with the assistance of chloroform. He believed the best way was to cage the queen on a comb. A gentleman of Cincinnati had successfully introduced queens by enclosing them first in a close wire-cloth cage and suspending it for a time in the hive. Subsequently he made an aperture at the bottom and covered it with wax. The bees then gnawed her out in a friendly way. It was a very unwise thing to disturb the hive after introducing the queen.

Mr. Chalmers wanted Mr. Jones to explain how he used chloroform. He thought it was another dangerous operation.

Mr. Jones said he confined his doctoring with chloroform entirely to his bees. After the application of chloroform the bees lay as if dead on the bottom of the hive, but when a little fresh air passed over them they revived. Care must be taken to give the whole hive a uniform dose. A sponge moistened with chloroform must not be introduced into the hive.

Mr. McKnight stated that his third gathering of honey had been very dark in color, resembling molasses. He had not discovered from what source the honey came. The flavor and consistency of it were satisfactory. The combs were also black.

Question. What can be done for a broken down colony of bees if discovered before the bees are smothered?

Mr. Jones explained that this occurred sometimes in shipping. He cooled the combs until they became stiff and then replaced them. The bees very soon repaired breaches.

Mr. Chalmers asked what could be done for bees smeared with honey.

Mr. Jones thought the best way was

to allow other bees to remove it. He would not wash them.

Mr. Forfar was of opinion that the best way was to wash off the honey with warm water.

Mr. McKnight said the bees shook their wings and used every effort to extricate themselves. If they could move round at all they would clean themselves.

Question. In moving bees for better pasturage how near may they be placed to their former position so that they will not return thither?

Mr. Corneil stated that he had moved some colonies three miles, and there had been no returning. He was, however, satisfied that he could move them a quarter of a mile without fear of their returning, provided he used precautions.

Mr. Jones had moved some of his a distance of less than two miles without any of them returning. If trees were present they could be removed a shorter distance. He did not believe in the practibility of moving them to different places in the same yard by setting up boards.

Mr. Corneil was of opinion that this could be done provided the bees were shaken up. The motion of a wagon would be sufficient.

Mr. Chalmers had found them to return two miles. This year he had moved a colony half a mile. He had shaken them up and set a board before them as a mark. Few returned.

Question. What are the advantages to be derived from reversible frames, and what is the simplest means of reversing them?

Mr. Rutherford, of Strathroy, said that by reversing the frames the combs were completed with feed and made perfect both above and below. When not reversed bees often left an open space below. By reversing, the four corners of the comb instead of two corners were filled with honey, and the center as usual with brood. He also described an improved form of feeder which he had invented. It enabled feeding to be regulated in speed and applied in any position.

Mr. Jones said he had tried most methods of bee feeding. During the last four years he had used about 120 barrels of sugar. In half an hour he had supplied as much as a thousand pounds by simply pouring the syrup upon the backboard of the hive. He fed at night and allowed them to consume it before morning. It was well to feed the whole yard at once to prevent robbing. He recommended nothing but the best sugar.

Mr. Corneil thought granulated or loaf sugar was better than crystalized sugar. In the former the water of crystalization was evaporated.

Mr. Rutherford preferred the Italians in some respects to the blacks. The Cyprians, according to his experience, were "terrors." Before handling them he required to smoke them above and below, and even then it was a hazardous matter to handle them. Last year his Cyprians had done admirably. This year they had also done well. He did not look upon his as pure Cyprians. He believed they were crossed with Italians.

Mr. Jones thought the Cyprians were too irritable, but when crossed with Italians they were excellent honey gatherers. He believed the Holy Land bees crossed with Italians were the best in his yard. He had had a sad experience with black bees. Six or seven of these colonies were starving, while the Cyprian and Holy Land bees were filling their hives with honey.

Mr. Woodward narrated a case of a queen that could not fly, being mated in her own hive, contrary to what was usually accepted as the rule.

Mr. Jones said this question had been discussed last year. No one at that time had been successful in obtaining fertilization in confinement. A committee, consisting of himself and Prof. Cook, of Michigan, had been appointed to make experiments. Prof. Cook had taken 5 young queens, cut their wings, and confined them by means of guards. Four of these never laid. One after fourteen days did lay, and the offspring was perfect. The queen of this hive had been examined, and was found incapable of flying. Prof. Cook came to the conclusion that she must have been mated in her own hive.

Mr. Corneil believed that dysentery was due to dampness of the atmosphere. Honey, he said, was a hydrocarbon, and when combined with oxygen water was formed. Comparative physiologists knew that honey in this condition produced dysentery among other bad results. The effect of damp weather on man was to prevent proper exhalation. Consequently the excreta that would have passed off by the skin was thrown into other channels and produced dysentery. It required dampness to produce fermentation, fermentation to produce bacteria, and bacteria to produce dysentery. The proper prevention was ventilation. When air was humid more ventilation was required than when the air was dry. Every 27° increase of temperature in the atmosphere doubled its capacity for absorbing moisture. He had made experiments to verify this. By making suitable arrangements of pipes in his cellar he entirely prevented dysentery among his bees. This was done by keeping the air dry and of proper temperature. He considered it as important to put a hygrometer as a thermometer in cellars, in order to test the humidity and temperature of the atmosphere. Experiments of a very careful character had been made in a hospital in Montreal to ascertain in what part of the rooms the air was purest and in what part foulest. These experiments showed that the purest air was in a layer on the floor and in a layer a little deeper close to the ceiling. The air midway between these layers was foulest. These experiments, the accuracy of which he did not doubt, exploded the old theory of the purest air being midway between the floor and the ceiling. Taking into consideration the law of the diffusion of gases, he could not see how a layer of carbonic acid gas could lie on the floor. If they enclosed two gases in any space both would be found after a time equally distributed throughout it.

Mr. McKnight was elected President for the ensuing year; Dr. Shaver, First Vice President, and W. C. Wells Second Vice President; Secretary, Mr. R. F. Holterman; Executive Committee, Dr. Duncan, Messrs. J. B. Hall, Jones, Chalmers, Thorn, Ramer and Colcock.

The prize of $10, given by Mr. Colcock, proprietor of the *Canadian Farmer*, for the best essay on "bee wintering" had been awarded to Mr. H. Clouse, Beeton, and is as follows:

WINTERING BEES.

Preparations for winter should be commenced about September 1, when it is both necessary and desirable that all weak colonies should be doubled up and strengthened; care being taken that all are supplied with good laying queens of not more than three years of age—of course, younger queens, all other points being equal, are preferable. The colonies must be kept breeding as long as possible, in order that there may be a sufficiency of young bees with which to go into winter quarters.

If there is not sufficient honey in the hive to promote breeding, and the bees are not gathering, they should be fed once a day—in the evening when they are less apt to rob. To make the feed or syrup, take standard granulated sugar and water, in the proportion of two pounds of the former, to one pound of the latter; bring to a boil, and allow to cool, then feed.

Rather the best vessel, in my experience, is a common coffee-pot, with a lip-spout, and the most expeditious as well as the simplest mode of feeding, is to raise the entrance end of the hive about one inch above the level; lift the cover and displace a corner of the bee-quilt, pouring in the syrup in quantities of a tea-cupful or less, according to the strength of the colony. On this point considerable care should be exercised as in the case of weak colonies, where they are unable to take up before morning the quantity given them, there is a chance that the other and stronger colonies may begin robbing.

I would advance as another reason for feeding in the evening, that, should there be a chance of their gathering natural stores the following day, their hives would be clear and nothing need then prevent them from going to work, whereas, were they fed in the morning they would remain at work in the hive and would lose what natural stores they might otherwise have gathered. By this method the hives would of a necessity require tight bottom-boards, thus preventing the feed from running out, where bottoms are not so arranged, other means would have to be adopted—such as the use of the different feeders, etc., which are in existence. This, however, is by far the cheapest, simplest and quickest mode of feeding, as by proper management, one person can (with the assistance of a small boy to take off covers, etc.), feed from 200 to 300 colonies per hour.

This feeding should be continued until about the first of October, but about the 15th of September, all colonies should be crowded to as small a space as possible (by the use of division boards), so that when clustered the bees will cover from 5 to 10 frames, according to their respective strengths, selecting always the oldest combs (as they retain the heat better) and those best filled with sealed and other honey and also containing a good supply of pollen, which latter will generally be found at either side of the brood-chamber, and more especially toward the entrance of the hive, taking care to place the combs containing the pollen in about the same position for winter, because in cold weather they are very apt to become chilled (if they have to go around the comb for food) before they can reach the cluster again.

If the bees are to be wintered in chaff or sawdust hives, the space behind the division board should be filled with sawdust, chaff, dry leaves or some other absorbant material—the former is preferable as the same thickness of it as of the others will keep the bees in a much better condition, besides being more easily obtained. Before filling in space behind the division board the colony should be examined to ascertain that they are all supplied with queens, and that there is enough space in the lower part of the combs, free from honey on which to cluster as it is not desirable that they should cluster on the honey since the heat is not so easily retained as by the empty combs. At this time any unsealed honey should be extracted, it becoming sour when left standing, and being apt to cause dysentery, care being taken to avoid breaking of the capping. After this has been done and the frames replaced, fasten the division boards securely; then pack and place over the top of frames, first, a bee-quilt which is free from propolis, and then the cushion or packing to absorb the moisture. By placing bee-quilt between frames and cushion you prevent the latter from receiving any propolis, or from being gnawed by the bees, thus enabling you to use the same cushion for years.

If the bees are to be packed in clamps they should be moved each day that they have been flying, from six to twelve inches until you have them in the place designed for them, which place should be sheltered from the north and west winds. Place the hives about 6 or 8 inches apart, with the entrances facing south and east—the former preferred. Then they should be raised up a foot from the ground to allow space for packing beneath, leaving the entrance of hive about one inch below the level to allow any water which might perchance have found its way into the hive, to escape. A channel should be formed the same height and breadth as entrance to hive, and long enough to appear through the packing in front, thus allowing the bees a passage from the outside. Before forming channel the hives should be examined and prepared in the same manner as are the sawdust or chaff hives, also packing behind the division board and using fresh quilt. Boxing should then be constructed, sufficiently large to allow a space for packing of about 12 inches at backs of hive and ends of clamp, and 6 inches in the front. Some have wintered successfully with less. Proceed with the packing towards evening when the bees are not flying, as if done while they are, they will experience more difficulty in finding entrance, whereas when flying out after packing is completed, they will mark the location and have no trouble on their return. The channels must be securely fastened so they will not be easily displaced by the settling of packing or any other reason.

When filling, stamp in the packing until the top of the hive is reached; then remove the lid and cover the frames with sawdust to the depth of one foot. Cover the whole securely so that neither rain nor snow may penetrate. They will then require no attention until the first fine day during the approach of spring, while the bees are out for a fly, when the hive should be examined—the object being to see that they have sufficient food; if not they should be given a frame of sealed honey, or a cake of sugar or candy, placed over the frames, as at this time it would be too early to feed liquids. The candy is made by the same process as syrup, with the exception that the amount of water is diminished. In some cases bees have been fed during the entire winter on this candy and have thrived well; when placed on frames in the fall it is made in cakes six or eight inches square, and about 2 inches thick, while for spring feeding it need only be about 1 inch thick.

When bees are to be wintered in the bee house they should be prepared by the same process as in out-door wintering, and at about the same time, using the same precautions; they will not then require any more care until the time for removal to their winter quarters, which is generally from the first to the middle of November—in other words just before winter sets in. If, after they have had a good fly, and return with empty stomachs, the following day is cool, and if you are of the opinion that fine weather is past, they should then be housed. First close the entrance by adjusting blocks and slides for that purpose; then remove the cover and place on top of bee-quilt a cushion which may be made to cover the entire top of hive, and about four inches deep of dry sawdust packing.

You will then carry the hives in carefully, so that the bees may not be jarred or the comb misplaced. If the bee house is not supplied with shelves, place a platform all around, 6 inches from the floor, and the width of the hives. On this place a row of hives, with the entrances toward the centre of the room, and 2 inches between the hives. On narrow strips at each end of the hives, place another row, with the entrances over the space between the hives of the first row. Then place more strips and hives until all are in position, the strongest colonies at the bottom and the weakest at the top, to give the latter the benefit of the heat from those at the bottom. The upper rows should be not less than 6 inches from the ceiling. If crowded for room two rows may be placed in the centre of the building, which should have double walls, with a space of 18 inches packed with dry saw dust, with the same thickness overhead. A pipe, 6 in. square inside, should pass from the centre of the ceiling of the house up through the roof; the full length of the pipe being about 10 feet.

The foundation must be frost-proof, and there should be an underground ventilator of about the same size as the upper one, running from the center of the floor, and having its outward mouth from 100 to 200 feet from the building, at a depth to which frost could not penetrate. By this means the temperature inside is not so liable to sudden changes. It should be kept between 40 and 45° during winter, with as little variation as possible. If it falls, the upper ventilator should be closed for a short time. This may be effected by means of a slide, either at the ceiling or in the garret.

In case the temperature is above the regulation, which often occurs near spring, the doors should be opened at nights; or ice should be placed in a position near the ceiling, with a vessel below to catch the drip, so that moisture may not be created. Entrances must all be removed after bees have been placed in winter quarters, and bees must be kept quiet and unexposed to the light. Excitement, light and uneven temperature will cause them to gorge themselves with honey, after which, being unable to have a cleansing flight, they may become affected with dysentery, which will soon be made manifest, by their soiling the entrance of hive. Immediately this is noticeable, they should be given a fly (when temperature is not below 45°), excepting in cases where the bees have been given a flight before the spring. It is not necessary to have them placed on their old stands, as after having remained in winter quarters for four or five months, they will have forgotten their former localities.

In putting the bees out in spring, some promising fine day should be chosen, when temperature is above 45° in the shade. Place them out in the forenoon so that they may have a good flight—covers to be placed on at once. Every entrance should be closed before commencing to carry out the bees, and may be slightly opened after being placed on the stands.

When inside wintering is adopted, a lamp might be introduced with which to examine hives, and care should be taken to scrape the dead bees, etc., from the entrances two or three times during winter, without disturbing the other bees. Be particular that entrances to hives packed outside do not get clogged up with dead bees, ice or snow—to prevent the latter, clamp roof should slant toward back of hives.

The method of wintering in bee house may also apply to cellar wintering. Believing that numbers of bee-keepers may have to resort to feeding this season, I have particularized that part of my subject more than I might otherwise have done. Fulfil these conditions and be assured of success.

THE NATIONAL CONVENTION.

As our representative was unable to attend the National Convention and take a report of the discussions, as we intended, we must defer their publication until the official report is received from the secretary. We are informed that about 100 bee-keepers were there and that the meeting was interesting and harmonious. It was decided to hold the next annual session in Toronto, Canada. The following were elected as the officers for the ensuing year:

President—D. A. Jones, Beeton, Ont.
Secretary—A. I. Root, Medina, O.
Treas.—C. F. Muth, Cincinnati, O.

Vice Presidents:—W. S. Hart, New Smyrna, Florida. Dr. J. P. H. Brown, Augusta, Ga. Dr. C. C. Miller, Marengo, Ill. J. M. Hicks, Battle Ground, Ind. O. O. Poppleton, Williamstown, Iowa. Rev. L. Johnson, Walton, Ky. L. Sartoris, Maryland. J. T. Davis, Shelburn Falls, Mass. Prof. A. J. Cook, Lansing, Michigan. Dr. O. M. Blanton, Greenville, Miss. E. M. Hayhurst, Kansas City, Mo. G. M. Doolittle, Borodino, N. Y. Dr. H. Bessie, Delaware, O. H. Hammond, S. C. J. W. Wilson, Tenn. Bowers, Va. C. Grimm, Jefferson, Wis.

Mr. C. F. Muth gave the following address on "Our Honey Market:"

Every producer soon learns to appreciate a rise in the market, or an increase in the demand of his produce, and it appears to me that no class of producers deserves more this happy change in the rise of the honey market than the bee-keeper, after, comparatively, short crops for the last four years, in most parts of this country. Of a modest and industrious disposition, he has put in hard work, under adverse circumstances, with an energy and steadiness which should be crowned with success.

It is 12 or 15 years ago, when, principally by the aid of Mr. Langstroth, we commenced to comprehend the movable-frame system. The honey extractor came next, and the introduction of comb foundation followed it. All these improvements were taken up with a keen eye, and made use of without regard to labor and expense, especially so by our American brethren. The result was an overstocking of the market. There was an abundance of extracted honey, far in excess of the demand. Low prices had to be accepted in order to effect sales.

Some of our zealous brethren expected that the natural laws could be suspended in favor of honey. They formed combinations and adopted resolutions that no honey should be sold for less than a certain price, that all middle men or dealers, should be excluded, that the producer should sell direct to the consumer; these and a number of other nonsensical resolutions were passed. One of those combinations offered the sale of their honey to me, if I would refuse to handle the honey of all other parties and associations. I admired their patriotism and liberalty, but left them alone.

The combinations and so-called co-operative arrangements of the present day are only feeble remnants of institutions which never benefitted anybody in particular and which will soon be wiped out of existence by that natural friend of the producer, the best and only co-operator in existence —"demand."

When we first commenced to astonish the world with our immense yields of honey, in the course of a few weeks, from one source alone (*i.e.* from white clover or linden) 200 lbs. of honey or more per colony, we were looked upon with suspicion. We learned to keep separate the honey of plants blooming at different times, producing thereby the choicest qualities possible. This by no means, weakened the suspicion resting upon us. The baker for instance or any other manufacturer would not believe that this fine flavored article of a beautiful golden color was clover honey. We had to take it back and bring him buckwheat or some other common quality with which his taste was familiar. Even some of our best druggists, well versed in other matters, looked incredulously at our best honey because they were not used to so fine a flavor.

All these matters have changed. There is perhaps not now a respectable merchant or manufacturer in Cincinnati who suspects our machine-extracted honey, and there is hardly a store to be found which does not keep it, nor a manufacturer using sweets at all, who does not use honey. There is perhaps no city in America where more extracted honey is retailed than in Cincinnati, nor where there is more honey used for manufacturing purposes. Sweet honey is even used for making sour pickles. Being a Cincinnatian, I can best speak of Cincinnati and if I am found to be exaggerating in any particular, I am willing to stand corrected. The growth of the demand for honey (I mean for extracted honey), is very encouraging. It is growing gradually and steadily. Its growth is a healthy one and will continue as long as consumers and manufacturers keep faith in the producer and dealer supplying them. If it was not for a few wicked adulterators the consumption of honey in this country would be immense by this time. However, there is no occupation without an unpleasant feature, and as bee-keepers we should ask no exception to this rule. But I feel safe in saying, that no overstocking of the market will take place any more, and the great and growing demand, at present, warrants that hereafter supply only will determine prices of extracted honey, like the rest of our great staples.

Time has brought on a great change even with the name of honey itself. Comb honey used to be the honey, and with a few old fogies that is still the honey, but it must be of a choice quality to find a ready sale and if it is a little unhandy to get it, or if the price is a little too high, it is a fact that parties do very readily without it. If comb honey is nice and cheap, a good deal can be sold, but it will remain a fancy article only, and the demand for it will never grow.

President Cook's Address.

Ladies and Gentlemen of the National Bee-Keepers' Association, and Friends: —It is fortunate for me that bee-keepers are of a practical turn, and so are always better pleased with facts and matters of interest than with mere eloquence. Thus in calling attention to what immediately concerns us as apiculturists, I can hardly fail to secure your interest and attention.

Since our last meeting, we have had to mourn the loss of one of the most noted bee-keepers of our country. A. F. Moon was the one to inaugurate a movement that resulted in the establishment of the Michigan Bee-Keepers' Association. He was the first, also, to move publicly towards the founding of this Association. As a writer of articles to the bee papers, and as the editor of a successful journal for years, he is well known to all of you. As a bee-keeper, he was very enterprising, and gave to the craft many valuable improvements, both in the way of apparatus and methods of manipulation. In the apiary, Mr. Moon was peculiarly at home. Few men in the world could surpass him in the skill and rapidity with which he manipulated bees. As Secretary of the Michigan Association, when Mr. Moon was President, I early learned to appreciate his energy, enterprise and ability as a bee-keeper. Mr. Moon never tired in the work of aiding and advising those who were learners in the art to the prosecution of which he gave his best work. To-day we all mourn the loss of one whose work will long endure in the more intelligent labors of those left behind.

The last year has been one that has generally given joy and hope to the apiarist. In some localities in the north, and in Canada, the cold season has frozen up the nectar glands of the flowers, and the bees have merely gathered enough to support them. We thus learn that cold no less than severe drouth and wet, will destroy the yield of honey.

The present season has emphasised the importance of a varied pasturage for bees. Some of us who got no clover honey and very little basswood, are rejoicing in a full crop of fall honey. Surely, we as bee-keepers can do no wiser thing than to study to increase the number, variety and excellence of our honey plants.

Another lesson of the season, is the value that may come from moving bees to the vicinity of bloom. Mr. George Grimm thinks this so important, that he makes his hives so as to the better practice it. I know of bee-keepers that got all the sections full of fine honey this past summer, simply by spending one day in moving their bees, while their neighbors, who practiced the usual method of remaining at home, got almost no honey, and are now feeding for winter.

Another point that we do well to consider, is the quality of our bees. Mr. Jones finds that while his black bees have gathered none, and would have starved had he not fed them, his Syrians have laid by considerable surplus. This Association can do no wiser thing than to encourage, in every possible way, the improvement of our strains of bees.

Owing largely to the stimulous given by your action last year, the exhibitions at our annual fairs have been better, more general, and better rewarded than ever before. Let us continue to urge separate buildings for the exhibition of bees, honey, etc., larger premiums, and then work to make them in the best degree successful.

Your committee on fertilization in confinement have all been at work to succeed in this important but difficult matter, yet in every case, if we except Prof. Hasbrouck, without any signal success. I have succeeded in having one queen mated in the hive, as she was clipped as soon as she left the cell, and there was perforated zinc at the entrance all the time, and upon trial we found that the queen could not crowd her thorax through the openings. She positively could not have been mated on the wing, as she never could fly. It seems as certain that she could never have been fertilized outside the hive. Several other experiments have all failed. Surely this matter is too important to be abandoned till we gain a method, if it is possible (and there is great reason to hope), that shall succeed in the hands of all.

During the year our attention has been called to several matters that are well worthy of mention here. The value of the perforated zinc in the apiary is assured. The desirability of an inclosure of wire gauze, and cloth to surround us and the bees as we are called to work with them when they are not gathering, is also established. This not only prevents the robbing mania, but we find that even Syrian hybrids will not sting in such a tent. We value ours very highly. Perhaps the greatest discovery that has been given widely to the public is the method discovered by I. R. Good, of Nappanee, Ind., to prepare food to be used in shipping queens. It is simply granulated sugar, moistened with honey just so the latter will not run, and yet so as to keep the sugar moist, and do away with the need of water in the shipping cages. Experience seems to have proven the value of this food beyond question. Is it not possible that this may give a hint to a first class food for winter?

With these preliminary remarks, I will conclude this address with the details of some investigations which I have made to determine the nature of the so called "dry feces."

[The investigations will be found in the Bee Journal of last week, page 626.—Ed.

Mr. C. F. Muth gave the following address on "Foul Brood."

Foul brood among bees, as the name denotes, is a disease of the bee while in the larvæ state. It does not effect the bee after it has attained its growth. The disease originates, in this country, from infection only, and spreads rapidly because of its very insiduous character. Brood may die in the hives from chilling, smothering, starving, or other cause, decay and create an unbearable stench at a time when colonies are too weak to remove the dead bodies. It will never create the disease "Foul Brood." We may hang these combs containing decaying larvæ in strong colonies, where they will be "cleaned out" without the least bad result.

Among the hives of my country apiary I found, about the middle of last August, 2 colonies with fertile workers, which I broke up by removing the hives and giving the brood combs to a young swarm a short distance off. I went out to the farm again about 4 weeks afterward, accompanied by a bee-keeping friend. While I was otherwise engaged, my friend, who is a good bee-keeper, overhauled a number of colonies and found one with "foul brood." He had seen the disease at my home apiary, and knows chilled brood as well as any of us.

In this case, however, I doubted my friend's judgment. Not having salicylic acid at hand, we got brimstone ready and deferred looking at the colony until evening, after we had finished the balance of the bees. I was surprised at the sight; about 4 weeks previous I had put 6 combs full of drone and worker brood, from fertile colonies into the second story of this rather weak one, with all the bees adhering to the combs, and shaking all the bees of both hives in front of this one. The bees had all left to join their old hives; the brood was exposed thereby, and all had died.

It bore a striking resemblance to "foul brood," but the brood, although in an advanced state of decomposition, pulled out whole from every cell with the head of a pin. This is hardly ever the case with foul brood, where the skin appears to decay at the same time with the body, and the dead larvæ appears to be only a soft mass without any cohesion. In order to convince my doubting friend, I placed the combs in second stories of strong colonies, and buried only the most offensive ones. I am certain I made no mistake in the matter, and mention the above in order to bring more light on the subject of "foul brood," and to contradict and put on their guard those of our friends who still claim that chilling creates "foul brood," or that a good or bad season has something to do with it.

So many sample combs infected with the disease, sent me for examination last summer from different parts of the country, convinces me that the knowledge of foul brood is one of the most important subjects to bee-keepers. Many are aware that my home apiary has been troubled more or less with foul brood for a number of years. I never made it a secret, but showed the disease to every visiting friend for his own information, whenever it was in my power. Foul brood never made any headway with me, and, in no case, was it spread by me, although I sold hundreds of colonies of bees, and a large number of queens. My apiary was free from the disease sometimes, for a year or more, with no sign of foul brood anywhere until the following fall or spring, I would discover again a cell of foul brood, or a number of them in one or more hives. Whenever I noticed those diseased cells in time, before they had thrown out their infectious spores, I made them harmless by means of an atomizer, and succeeded in the majority of cases. The hives with which I failed kept me in "hot water" for months, and sometimes for all summer, and then, when "patience had ceased to be a virtue," they were subjected to the radical cure as given in my pamphlet, "Practical Hints to Bee-Keepers."

It was a mystery to me what caused the occasional re-appearance of foul brood in my apiary. I know that spores of the disease may be hid for years in crevices in or about the hives, that a diseased larvæ pulled out and dropped anywhere may infect a bee accidentally alighting on it, but I was so particular to remove all such causes, aided by the peculiar location of my apiary, that I could not believe a friend correct, when he claimed that I infected my bees by the use of salicylic acid.

Light was thrown on the subject last spring and summer. A party about a mile from my house (bee line perhaps ¼ mile) kept 12 colonies or more of bees for several years, and lost the last one last spring. I was well acquainted with him, but his black bees and old fogy style of keeping them had never excited my curiosity. He came to me about the latter part of May and related that he had kept bees now for 10 years, that he got less bees every year, and that the last colony had died this spring, that a lively robbing had taken place when his last colony fizzled out, and that the robbers were my yellow bees; "and now," he concluded, can't you buy my hives and combs," etc. I went out and found him in possession of about 600 combs; every one of his colonies had died of foul brood. The combs showed it satisfactorily, and my bees, no doubt, had "saved the pieces," whenever any one of the colonies had given out.

Three of my colonies apparently, had been participating in the last feast, during the beginning of that beautiful spell of pleasant weather in March. Two of them were put on foundation, and were cured in the same month, while the bees of the third were sold to a druggist (for medicine), and the combs burned. I did not know the source of my trouble until my neighbor saw me in the latter part of May.

If I here give my experience in detail, it is done because I think that in this manner it is more likely to "stick" with the majority of bee-keepers. I purchased the hives referred to above, with the proviso that they be scraped off nicely, and the combs and frames burned before the hives were delivered. This was done. The hives were placed against a dark wall in my stable, until I should have time to disinfect them. No flowers were then (about June 1) yielding honey, and bees went anywhere to find sweets, in this neighborhood. A lot of honey was lying in the stable, and several barrels were leaking, and when I came into the stable one day I was surprised at the number of bees rising from the floor, alighting and resting on those bee hives and then making for some small windows under the ceiling. The thought struck me at once that the bees alighting on those hives would take home with them the spores of foul brood. I proceeded at once to disinfect those hives by cleaning them out and moistening every part thereof with the medicine by the means of paint brushes. It was, however, too late. Of my 36 colonies of Italians bees, only 5 or 6 were not infected, and these now remain uninfected. The mischief just being done and finding only a few, say from 1 to about 10 or 12 infected cells in a hive, I expected to cure the most, if not all, by a few good attempts at atomizing, and I succeeded with 7 or 8 colonies. I examined all the hives at least once or twice a week thoroughly, and when September commenced, and I still found from 1 to 4 cells diseased in every one of the balance, my patience was exhausted, and I immediately proceeded to the radical cure, I shall describe further on, what should have been adopted at once, and which is the only complete cure for foul brood known to me.

It was no small job, and I had accomplished but little; about 4 gallons of water was mixed with 10 gallons of honey and a lot of quart Mason's jars filled therewith; to every jar was added an ounce of foul brood medicine thoroughly mixed and a perforated cover put on. I use the Langstroth 10-frame hive. The first infected hive was put to one side and replaced by the lower story of another clean hive, provided with 10 sheets of foundation, covered, and a jar of medicated honey, inverted over a hole above it; a platform was now placed against the alighting board, and the bees of every comb of the infected hive were brushed on the same and made to enter together with all the rest. It will not take them long to empty these jars, which should be replaced by full ones as soon as empty until all the foundations are built out, and the bees have honey enough to winter on. The old combs can be extracted and rendered into wax, but great care should be taken that no bee alights on them nor on anything else pertaining to an infected hive.

It is stated by good authority that the spores of foul brood are made harmless through the boiling process, but I bury the remnants of combs, and render wax at night so that bees are excluded entirely. The hives and frames are disinfected thoroughly by means of a good atomizer, or the medicine is applied by a paint brush, not a part must be missed. After the first hive is disinfected, as described, it answers the purpose of a new one, and can be used for the next infected colony which is subjected to the same treatment as the first, and so on. My atomizer is always ready, filled with the medicine, and my fingers and knife are disinfected at intervals, and when I leave an infected colony. This cure is complete and has been tried by me, perhaps a hundred times or more. No combs from an infected colony should be used again in a healthy one, because one of those spores smaller than a speck of dust, invisible to the naked eye, attached to the comb, is sure to breed mischief.

My foul brood medicine is the same as given at our last meeting and in "Practical Hints." It will do no harm to repeat it. The following is the formula: 16 grains salicylic acid, 16 grains soda borax, and 1 ounce of water. It is cheap, can be put up by every druggist, and every bee-keeper should have a bottle of it ready for an emergency.

As time is money in this country of ours, it may be best and cheapest for us to apply brimstone to every colony affected with foul brood. This, however, should be done at night, when all the bees are at home. The hive should be closed below, at the entrance, with a pan of brimstone ignited, on the top of the frames, and a tight cover placed over the whole. The fumes of sulphur being heavier than the air, descend, and kill most effectually all life inside of the bee hive. Bury or burn all its contents, and be sure to disinfect the hive before you leave it.

Too Late.—I wish to express my regret that the call made by Prof. Cook, requesting that the different foundation machines be at the National Convention, reached me too late. The arrival of the Bee Journal to-day was the first knowledge of it I had. It would have been impossible for me to attend in person, but would gladly have sent a man with a press if I had known in time that other machines were expected there.

D. S. Given.

Los Angeles, Cal., Sept. 29, 1882.

☞The Iowa Central Bee-Keepers' Association will hold its annual meeting at the office of Graham & Steel, Winterset, Iowa, on Friday Nov. 3, 1882, at 10 a. m. All interested in bee culture are invited.

Henry Wallace.

☞The fifth annual meeting of the Northern Michigan Bee-Keepers' Convention will be held at Pewamo, Ionia County, Mich., on the second Tuesday and Wednesday (10th and 11th) of October, 1882. Pewamo being on the D. & M. and H. & M. R. R., it will be accessible by rail. The members will do all in their power to make the meeting interesting.

H. M. Roop, *Pres.*
O. R. Goodno, *Sec.*

☞The N. W. Bee-Keepers' Association of La Crosse, will meet in the City Hall in La Crosse on Friday, Oct. 13, 1882. All interested are invited to be present. G. J. Pammel, *Sec.*

☞The Northwestern Bee-Keepers' Convention will meet at Chicago, Ill., on Wednesday and Thursday, Oct. 18 and 19, 1882. The office of the American Bee Journal has been kindly tendered as a place of meeting. A cordial invitation is extended to all bee-keepers, and especially those of the Northwestern States, to be present. The meeting takes place during the last week of the Inter-State Industrial Exposition, to enable all to obtain reduced railroad rates. First session at 10 a. m.

C. C. Miller, *Pres.*
C. C. Coffinberry, *Sec.*

☞The Union Bee-Keepers' Association of Maryland, Virginia and West Virginia, will meet at Hagerstown, in the room of the County Commissioners, at the Court House, on Wednesday, Oct. 18, 1882, at 1 o'clock, p. m., the session to last two days. The Washington County Fair will then be in progress, which will give persons an opportunity to attend the exhibition. All persons intending to go will please drop me a card, so that I may secure for them half-fare rates.

J. Luther Bowers, *Sec.*

☞The fall meeting of the Northern Ohio Bee-Keepers' Association will be held in Whittlesey Hall, Norwalk, O., Saturday, Oct. 21, commencing at 9 a. m. A full attendance is solicited, as it will be a meeting of more than usual interest. Principal subject for discussion: "How shall we winter our bees without loss?"

S. F. Newman, *Sec.*

☞The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning County, in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th.

Leonidas Carson, *Pres.*

☞The Southern California District Bee-Keepers' Association will hold their annual Convention in Union Hall, Los Angeles City, Oct. 19, 20, 1882, during the week of the Agricultural Fair. The Convention promises to be of so much interest that no bee-keeper should miss it. Ladies are pressingly invited to attend.

J. E. Pleasants, *Pres.*

☞The Tuscarawas Valley Bee-Keepers' Association will hold their next meeting in Wilgus Hall, Newcomerstown, O., on Tuesday, Oct. 10, instead of Oct. 5th. This change is made in order to allow members to visit the National Convention at Cincinnati.

J. A. Bucklew, *Sec.*

CORRESPONDENCE

For the American Bee Journal.

Apiarian Salmagundi.

A. B. McLAVY.

Complying with Mr. Todd's request, I will say that in the early spring I frequently find scorpions in my hives over the mats. I have seen them of almost all ages, to judge by their size. I think their business end, or tail, is either born with them, or develops very soon after birth, for I have never seen one too young to have it appended. I suppose they seek the warmth above the cluster, as I have never been able to see any other object they sought.

Let me add a mite to the drone subject, seemingly in conflict with the generally accepted version of their usefulness, except for fecundating queens. Early in August I observed in all of my large colonies a great quantity of drone brood, often in the 1st and 2d stories. In the present month the drones seemed to me to be in the majority over the workers, but at the same time the combs were full of worker brood, and the drones were clustered thick over the brood. At this writing the colonies are full of workers, and they are killing off the drones, and that, too, when the honey flow from fall flowers is as fine as it can be. My bees are storing more honey now than in the spring.

Now, does not this argue some other use for drones? There are no cells, as in swarming season; the honey flow is fine and promises to be excellent, yet in the face of the glowing prospects, the poor drones seemingly having served their purpose, are being sacrificed.

I cannot fully accept the commonly-taught adaptation of the drones, and nothing more. The view I take is, that the prospects being bright, the bees bred the drones so as to take advantage of their corpulency (animal heat) in breeding up; that being accomplished, they are useless now, as an examination of my colonies will show, for they are "busters."

What is the future of wax? Without an idea either to "bull" or "bear" the price of wax, I make this inquiry. To my mind, the price of wax now is too low, and for the same reason that applies to any other commodity—the same inexorable law of supply and demand. The same remark applies to any one else that it does to myself. I use ten pounds and produce two. As a support to my position, I am informed that in Mexico the demand exceeds the supply, and that, too, when 60 cents is paid for it.

I think a remedy can be found by some enterprising Yankee bee-keeper, and I suggest it. It occurs to me that paper can be rolled out upon foundation rollers, the paper being wetted and the rollers heated, leaving the side walls on the paper. Now dip the paper in a hot bath of wax, so as to give us the foundation both stronger and lighter, and using perhaps 60 or 75 per cent. less wax than at present. This has reference to foundation for extracting only. If this is worth anything, I cheerfully offer it to the fraternity.

Your appended remarks upon a clipping in No. 37, do not present the facts fairly regarding negroes as bee-keepers. While but few of them are progressive bee-keepers, yet when they are property-holders, they are very apt to keep bees. I think that probably 150 or 200 colonies of bees in this country are owned by negroes, and I find quite a number of them are valuable assistants at swarming time, and at other times, too. "Don't you forget it," they keep bees; they get the honey; they get stung, but they keep them "alle samee." My man Jerry handles a swarm just as well as any one.

Bastrop, Tex., Sept. 25, 1882.

For the American Bee Journal.

Poisonous Gases around Bee Hives.

R. F. HOLTERMAN.

Upon my return from the Toronto Industrial Exhibition, I find the BEE JOURNAL, with an article on page 582, by Mr. Ed. Moore, in which he expresses a desire that some scientist enlighten him. Now I have no pretensions to so elevated a position, but I believe that I can throw a little light on the matter.

The freely circulating atmosphere has no such impure atmosphere next to the earth, provision for this has been made in the following manner: The animal world takes in oxygen and gives out water and carbonic acid gas, and to prevent too much of this being generated, it is taking up water, lime, and other substances; the plant life takes it up through these and other mediums, and gives off more or less pure oxygen. In this way the animal and plant kingdoms balance one another.

In the Valley of Death, in Java, where carbonic acid gas exudes from the caves in the earth, and the atmosphere is this gas in almost a pure state, no animal life exists, and on the other hand plant life is luxuriant. Scientists ascribe the great growth of vegetation (shown by coal-beds and other traces) in antediluvian times to the predominance of the carbonic acid gas. Then the winds and radiation from the earth's surface through the rising and setting of the sun, keeps the atmosphere in motion, thus keeping the gases of different weights constantly mixed. If it were not for this, the fish and all animal life would perish in the sea for want of oxygen, and cities would be visited by pestilence, but the gentle motion of the atmosphere, assisted by rain and windstorms keeps the whole in circulation.

I have tried different elevations for bee-hives, and prefer about three inches, with a board slanting from the entrance to the ground. If lower, the bottom board is too damp, causing bees to draw upon the combs more easily; if higher, when loaded with honey they often drop to the ground before reaching the hive, especially in the spring of the year when cold They are less exposed nearer the ground. They are better higher up as regards toads, but I have never found these latter very destructive.

Fisherville, Ont., Sept. 21, 1882.

For the American Bee Journal.

Glucose Detective.

T. MAHER.

Allow me to correct a little the account of our trials at your office last week, by chloride of barium, to detect free sulphuric acid in the glucose used for mixing with sugar, syrups and honey.

The first experiment was upon a so-called pure article of "golden syrup," about one ounce of which was poured in a glass to which was added about 2 ounces of water, this was thoroughly mixed by stirring till a very clear solution was obtained; after it had rested awhile, a few drops of the chloride solution were added carefully; a small white cloud of sulphate of baryta immediately appeared, showing the presence of not a very large percentum of free sulphuric acid, but of a sufficient quantity to form a light deposit, after a few hours, of this sulphate of baryta.

Test No. 2 consisted of a very small quantity, about half a small teaspoonful of Davenport "grape sugar," scraped with a pocket knife from a sample lump as large as an English walnut; this small quantity was also dissolved by carefully stirring it in 4 or 5 ounces of water, till another clear solution was obtained; it was also rested awhile, after which a few more drops of the chloride were added, when another cloud appeared thicker this time than on the first trial, which, as you say, did produce, after a few hours, a perceptible precipitate, not, however, of insoluble glucose, but of sulphate of baryta.

As for test No. 3 of the carefully corked sample phial of honey sent to you about two years ago, and which showed some thick fluid above the granulated portion in the bottom, the clear solution of it in the glass did not show any cloud on the addition of the few drops of chloride, hence no precipitate did take place, there being no free sulphuric acid in it to decompose the soluble chloride into an insoluble sulphate.

Let me add that any one can purchase for a dime or a nickel, an ounce of chloride of barium in crystal from a respectable drug store, dissolve it in a tumbler in 6 ounces of pure water, stirring with a teaspoon till a clear solution is obtained, after which it should be set by to settle well in a small bottle for about 12 hours; some light earthy sediment may then appear in the bottom of the bottle, from which the clear solution above it may be separated by pouring it carefully into another clear bottle, to be thus kept for use, carefully corked.

Chicago, Sept. 29, 1882.

For the American Bee Journal.

Some Hints about Conventions.

C. C. MILLER.

Perhaps I ought to say "two hints" as that number comes prominently before my mind just now.

The first is that each member should before he leaves home, write down a list of the subjects he wants discussed and the questions he wants answered.

The second is that he should take his wife with him, or other members of his family.

The experience of the past meetings of the Northwestern Convention at Chicago confirms the opinion that in no way can a meeting of bee-keepers be made more interesting and profitable than by having the time mostly or wholly spent in live discussions of practical topics, and in asking and answering questions such as are constantly arising in the minds of those who make their living through the labors of the busy bee.

Do not most bee-keepers' wives have some interest in their husbands' calling? Would they not be interested in hearing and taking part in bee-keepers' discussions? I am much mistaken in my estimate of bee-keepers' wives if they are not, in the main, an intelligent set, possessing an unusual amount of good, practical common sense; women who do their full share of the work and to whom a couple of days rest would be a blessing and whose presence at a convention would largely increase its interests. My wife has worked side by side with me in the apiary this summer, has taken her full share of stings and work, and is entitled to attend the Convention as well as myself. I expect her to go with me and I don't want to see so few women there that she shall feel "like a cat in a strange garret."

Allow me to give a pressing invitation to all bee-keepers to be present at Chicago. The meeting occurs the last week of the Exposition when excursion tickets can be had from nearly all points. Perhaps the BEE JOURNAL will lay us under still greater obligations by telling us just how to reach the place of meeting, and by giving us some information as to convenient hotel accommodations.

Now just as soon as you have finished reading this, please sit down at once and commence writing a list of the questions and subjects you want discussed; even if there is only a single one, write it down that you may not forget it. Then talk over with your wife the matter of her accompanying you, and tell her it will do you good, and her good to have her along. Like as not she will object that she hasn't just the right clothes to put on, or that some "woman fixen" is out of repair about her bonnet or dress, but tell her that the latest style is not to dress up much for conventions, and that other bee-keepers as well as her husband are men of sense and value a woman for her qualities of head and heart and not for the clothes she wears. Please be on hand if possible at 10 a.m. Wednesday, Oct. 18. All lady bee-keepers are urgently invited whether they have husbands present or not.

By an oversight of the president, the notices already given say that the Northwestern Convention meets Oct. 17-18. Instead of this it adjourned last year to meet Wednesday, so please note that it meets Wednesday and Thursday Oct. 18-19.

Marengo, Ill.

SELECTIONS FROM OUR LETTER BOX

Good Work in Extracting.—I inclose you the flower of a weed that grows all through the woods here. I wish you would give the name. It has been in bloom ever since the 1st of August, and my bees have never ceased to work on it since. Bees are still booming on goldenrod. At present the nights are a little too cool for the upper stories. I think Iowa can show up with most any other State this season on honey yield, and there cannot be any better quality than ours this season. I see by the BEE JOURNAL of Sept. 13th that Dadant & Son think they have the largest day's extracting on record. On Monday, Aug. 28, working from 9 a. m. to 5 p. m., and taking 1½ hours' nooning, I extracted 500 lbs.; I did all the work of carrying the honey in and everything else, and on Saturday afternoon, Sept. 9th, I extracted 280 lbs. from 2 p. m. to 6 p. m.; and this was capped ⅔ of the way down each comb. I use a 2-frame extractor. Now if any one can beat this, let them speak out. H. O. MCELHANEY.

Brandon, Iowa, Sept. 15, 1882.

[The plant is *Lophanthus scrophulariæfolius* (giant hyssop), a plant occurring throughout a very wide region of the Northern States, not usually abundant, except in rich soils well protected from the tramping, etc., of cattle. No doubt a good honey plant, yet far inferior to many others of less vegetative vigor. T. J. BURRILL.]

My Third Annual Report.—The season just closed, although better than either of the two preceding, has not been altogether satisfactory to the bee-keeper in this section of Iowa. The spring and early summer were wet and cold. The little honey secreted by the flowers was washed out by the frequent rains. An unusually late frost, May 21st, killed many of the honey flowers; apples and plums were in bloom and completely destroyed; basswood buds were so frozen that no bloom was seen; the bees got just enough honey to keep up brood-rearing. Nearly all our surplus was stored after the middle of July. At that time, many of the colonies did not have 5 pounds of honey in the brood chamber, although they had commenced to store in the supers. With the blooming of sumac came our first extracted honey. That yielded well, and was a profitable honey plant. The honey is thin, but of good flavor, and improves on acquaintance. After sumac, came what we call the yellow evening primrose. There happened to be a neglected field near our place, and there were acres of primrose in it, and the bees preferred it to any other flower. After the primrose came the thistle family, and they have been in bloom ever since. These three plants furnished about all the honey we obtained this year. No basswood nor white clover honey, and none from buckwheat. I heard one gentleman say that he thought there was some honey-dew in the timber, and also that he saw a great many bees on the corn tassels, but I did not notice either. Our honey is all light-colored, and that gathered after sumac disappeared is very thick, so thick that it will scarcely run through a common-sized funnel. Number of colonies last fall, 18; number this spring, say June 1st, 15; lost in wintering, 2; lost in "springing," 1; increased by natural swarming and by young queens given to nuclei, and built up, to 20. Tried to control swarming, but could not. Some colonies swarmed four times, which were returned to the old colony. I winter always in a cellar under the house with the temperature of cellar last winter 34° to 40° F. Kind of hive used similar to Langstroth in size, only the frames run across instead of lengthwise. Number of pounds surplus, extracted, 882½ lbs.; in 1½ lb. section boxes, 265½; total number pounds surplus, 1,148; average per old colonies, 76½ lbs.; largest from any one colony, 152 lbs. Some as fine honey as I ever saw was made after Sept. 1st. Quite a large amount was stored after that date. The whole family of fall yellow flowers, goldenrods, asters, artichokes, etc., were almost entirely neglected by the bees this fall. I watched in vain for a bee on them. EUGENE SECOR.

Forest City, Iowa, Sept. 22, 1882.

A Scotch Bee-Keeper in Texas.—As mentioned in my last letter to the BEE JOURNAL, on p. 507, I have continued my journey from Illinois to Texas. Through the kindness of the editor of the BEE JOURNAL, there is now another green spot in my memories of America. His letter of introduction gave me a cordial welcome at the home of Judge Andrews, and, truly, I did not journey in vain, for his apiary is a grand sight. He seems to be personally acquainted with his bees in each colony, and speaks of his queens as a good farmer does of his cattle. He has over 200 colonies of pure Italians, for which he claims two particular points of merit, beauty and docility, and I can vouchsafe for the latter, as I waded through a perfect forest of hives and never received a sting. He extracts honey with a machine of his own invention, and his harvest this year is immense. Mr. Andrews also has some of the finest cattle I ever saw. One calf, of the Jersey breed, he has been offered $200 for. He keeps only only the best and purest stock. JAMES ANDERSON.

Allen, Texas, Sept. 20, 1882.

Bee and Honey Show in London, Ontario.—We have just had our Western Fair, and the apiarian exhibit was good, showing quite plainly that bee-keepers are on the increase in Canada. We had more exhibitors and more exhibits. The honey show was very far in advance of all other years; the honey exhibited was in cans, jars, boxes, and sections of different sizes. Mr. Chalmers of Mussellburg, Ontario, had the largest exhibit, comprising honey, comb foundation, smokers, knives, etc.; also a cage of Italian and one of black bees, which attracted a great deal of attention, and were the admiration of all lovers of the little busy bee. We also had the different methods of wintering explained to our satisfaction. The bee men give a very poor report, as regards the honey crop of Canada, and a great many are talking of selling out, which some of the far-seeing bee men take advantage of, and are buying at low prices, hoping to realize a handsome profit next summer, keeping in mind the old saying that "after a storm comes a calm."

W. H. WESTON.

London, Ont., Oct. 3, 1882.

That Champion Colony.—Since my unprecedented yield of honey from the horsemint, I have received many letters asking about the habits and growth of the great Texas honey plant. There are several species of the horsemint, and the best is *Monarda punctata*—stem erect, branched, glabrous, obtuse, angled, whitish; leaves oblong, lanceolate, remote and obscurely serrate, tapering at the base, smooth; flowers in whorls, and has from three to ten whorls to the flowerstalk; bracts lanceolate, colored, longer than the whorl; calyx long; corollo hairy, dotted with brown, the upper lip slightly arched, longer than the lower, and completely protects the nectar from rain, so it matters not, rain or shine, the bees never stop only when the rain is pouring down. It grows almost anywhere, in the swamps, on dry, loose, loamy soils, on the high prairies, and on the post-oak lands; grows from three to five feet high. It generally comes up about the last of December, and first of January, and begins to open its honey-laden flowers about the 20th of May, and, if seasonable, that is, if a good rainfall every 10 days, the flowers will last until the 1st of July, giving the wide-awake bee-keeper a chance for 200 lbs. and upwards of choice honey from each colony. It will grow in the fall, sown on the wheat and oat fields, and as soon as the grain is removed, about the first of May, the mint grows up rapidly and begins to bloom about the 1st of July; but very few years do we ever get any benefit from this late crop, on account of drouth. It grows well on pasture lands, as nothing will eat it. It dies out root and branch as soon as done blooming. It is not a pernicious weed, and is easily destroyed with the plow or hoe. The following is the report of the big colony: At date of last report, 700 lbs.; July 30, extracted 8½ lbs. and removed two upper stories; Aug. 23, extracted 49 lbs.; Aug. 29, 22 lbs.; Sept. 8, 18 lbs.; I allow for waste and uncapping, 2½ lbs., which gives 800 lbs. from a single colony, the progeny of a single Cyprian queen—no increase—not an egg or particle of brood, or other help, from other colonies. My crop of spring honey is 6,000 lbs. from 36 colonies spring count. I will lose over 2,500 lbs. of fall honey, as it is not fit to use, so I have quit extracting, and my hives are full of sealed honey and some swarming. I now have 97 choice, full colonies, and 15 small colonies; lost 15 or 20 by swarming to the forest. Had I been prepared, my report would be triple this. Hope to do better another year. The fall honey is from the wild camomile, and is equal to quinine for sweetness.

B. F. CARROLL.

Dresden, Tex., Sept. 18, 1882.

A Good Profit.—My honey is not all sold, but I expect to realize $15 per colony, spring count, from the honey, besides an increase of 100 per cent.

P. J. ENGLAND.

Fancy Prairie, Ill.

Bees have Done Finely.—Since the first of July the bees have done finely here. Mr. M. Bailey and Mr. Braught in this county have each obtained over a ton of honey. A. J. ADKINSON.

Winterset, Iowa, Sept. 30, 1882.

Position of Pure Air in Rooms.—At At the Bee Convention in Toronto, Mr. Corneil tried to give some light on this subject (see page 644 of this Journal), and if true will be read with interest in connection with my remarks on page 582 of the BEE JOURNAL for Sept. 2d. Mr. Corneil's remarks are a puzzle. We have been taught that the foulest air is the heaviest; here we have it asserted that the purest is both heaviest and lightest, and that the foulest is between the two! It is lucky for small animals after all, also for the giraffe; they both get the advantage that we, poor midway creatures, are as a general thing deprived of. How is it that facts of such importance are so changeable? With statements of such importance, men must surely give opinions as facts. This impure air cannot be so very destructive to life, or it is not easy to tell how long any one may live if he walked upon stilts, with his head constantly up to the ceiling; then to overcome the difficulty of the different heights of ceilings would require several pairs of stilts. But what about the pure or impure air outside of a building, to correspond with that next the ceiling? what height would the pure air get, if the ceiling was not there? perhaps some one will inform us concerning that. We have been informed that the correct distance of the sun has not been given until lately; there is merely a few millions of miles of error, but that is not much. Are the two layers of most pure gas differently composed? One must be the *heaviest*, and the other the *lightest* to be as stated. EDWARD MOORE.

Barry, Ont., Oct. 2, 1882.

Botanical.—Again I send you some samples of flowers on which bees have been busy, in rotation. Would you be kind enough to furnish names and notes as to their value as honey-producing plants. No. 1, the yellow flower, with bowl full of milky, sticky matter, is found all over the mountains from the foothills to the timber line. No. 2, the smaller yellow one, is found about the same locality. Bees began on them about Sept. 1st. No. 3, the blue flowers, are now daily covered with bees. These flowers are found both on the mountain sides and on the streams. Nos. 1 and 2 grow about 1 foot high and in large bunches of 12 to 30 flowers on each bush. No. 3 has 4 to 8 stalks 2 feet high, with 50 to 60 flowers on each stalk. I also send you a specimen of white sage that covers the mountains here. Bees do not seem to notice it here. Is it the same as that of California? Answers to the above queries will be of interest to all Colorado bee-keepers, I think.

PHILIP REARDEN.

Jamestown, Col., Sept. 9, 1882.

[No. 1, *Grindelia squarrosa*. A peculiarly western plant not known east of the Mississippi river, but growing abundantly on the plains of Nebraska and Colorado, also in Mexico. The viscid characteristics of the heads and flowers is interesting and peculiar. Will this correspondent, who has the chance observe what this last has to do with inviting or preventing the visits of insects?

No. 2, *Chrysopus villosus* (golden aster), resembles our common asters, except that the flowers are yellow instead of white or violet. Wisconsin to Kentucky and westward. Very common on plains in Colorado.

No. 3. *Aster lævis* (smooth aster). A beautiful plant in half shady places. Common in Northern States.—T. J. BURRILL.]

From Minnesota.—I started in spring with 13 colonies. I had them in my oats bin till the 1st of March. They were strong in bees and brood. The 1st of March was very fine, and they being restless, I set them out. About the fifth we had rain, then it became cold, and before I was aware the brood was chilled. The first of June one was left; but there were more bees starved to death last spring. April and May were so cold that there were only a few days in the two months that they could fly, and in May we had a frost that killed nearly all the fruit blossoms and the basswood. There was nothing for them to get honey from till in June. Some who were quite extensive bee men lost all and quit bee-keeping. Bee men in Brown county lost nearly all. One man, out of 45 had only 3 or 4 survive the cold spring. They are mostly the common brown bee, with some Italians and hybrids, they did not swarm till in July and August. There are more bees in the woods than usual. Bees

have done well. I had a swarm come out on the 16th of July and put them in a hive with 9 frames 10x15 inches in the clear, with more or less of old combs; in one week I put on 30 1¼-lb. sections; they are all full. All that I have seen, say that their bees have done well this season. M. SHERER.
South Bend, Minn., Sept. 17, 1882.

A Good Report from Michigan.—We have had a very good season here. I began with 42 colonies in the spring, and now have 130, besides losing 7 or 8. I have about 2,000 lbs. of beautiful white section honey, and 2,000 more plain pine sections which will be filled in two weeks if this fine weather continues. I also have 500 lbs. of extracted honey, the quality of which cannot be surpassed. I made a mistake which I fear will prove fatal to me, in sending to a "middleman" for supplies, as his long delay in filling my order has been the cause of great loss in various channels. I am now entirely out of sections, and bees very strong. We have had a continuous honey flow throughout the season, and hence excessive swarming. We think our district is good for a big yield, for years to come.
THOS. H. SHEPHERD.
Ubly, Mich., Sept. 8, 1882.

Bees Still Gathering Honey.—We have had several frosts but our bees are still gathering honey from red and white clover, asters and goldenrod. I am preparing the hives for winter as fast as possible. I will send you my report soon, and expect it will appear pretty big. S. A. SHUCK.
Bryant, Ill., Sept. 28, 1882.

A Tremendous Report.—My season's report is as follows: Cold and wet in April, May and most of June; fed all colonies from May 1st till June 4th; first swarm June 23d. Spring count, 19 colonies; increased to 71; extracted honey 3,000 pounds; one-pound sections, 1,000; from one colony of Syrian bees, 235 pounds of extracted honey and 7 swarms. All are in good condition for wintering. Best colonies for honey are one dark Italian and one light Italian—each 350 pounds extracted honey, but no swarms.
S. H. MOSS.
Colchester, Ill., Sept. 27, 1882.

The Seed of the Golden Honey Plant.—I see that some who purchased the seed of the golden honey plant have failed to get it to germinate. All of the seed sent out was first class in quality. If it failed in any case, it was from some peculiarity of soil, or in the planting or sowing. Now, if those who failed to get it to grow will write me a postal giving their post office address, I will mail to each a three-ounce packet gratis, that they may try it again. I think that if planted in the fall and covered with soil about ½ inch deep, it will not fail to grow in any part of the country where the ground freezes in the winter. DR. G. L. TINKER.
New Philadelphia, O.

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For a Club of **2**,—"Bees and Honey," in paper.
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" " **4**,—Apiary Register for 50 Colonies, or Cook's Manual, paper.
" " **5**,—Cook's Manual, in cloth, or the Apiary Register for 100 Colonies
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Two subscribers for the Monthly will count the same as one for the Weekly, when getting up clubs for the above premiums.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

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The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers.

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◆

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

☞ New subscribers for the Weekly BEE JOURNAL for 1883, can obtain all the rest of the numbers for this year by sending $2 to this office.

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We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

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Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

The Monthly **Bee Journal** and any of the above, $1 less than the figures in the last column.

◆

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ Hundreds of clergymen, doctors and others have used Kendall's Spavin Cure with the best success. 37w4.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., October 9, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 7c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 16@20c. on arrival; extracted, 7@10c. BEESWAX—Firm at 20@25c. per lb.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand is good for choice white comb honey in 1 and 2 lb. sections, and prices are without material change, 18@20c. being the range of this week's sales. White extracted, in cans, 10@11c., in kegs and casks, 10c.; dark, 9@9½c. Dark comb honey, 12½@16.

BEESWAX—Yellow, 26c.; dark, 18@22c.

R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—The market is firm for choice qualities but the trade is not active.

We quote white comb, 18@20c.; dark to good, 12@15c. Extracted, choice to extra white, 8½@9½c.; dark and candied, 7½@8c. BEESWAX—30@32c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Plentiful and dull. Comb lower, at 15@18c—latter for choice white clover in small packages; strained in round lots at 6½c.; extracted in cans at 9@10c.

BEESWAX—Sold fairly at 26c. for prime.

R. C. GREER & CO., 117 N. Main Street.

NEW YORK.

HONEY—Demand slow. We quote: Comb in the small sections, white, 18@22c. Extracted, 7@10c.

BEESWAX—The stock continues light, and prime Southern held up to 30c., with little if any obtainable below 29c. Western, pure, 28@29c; Southern, pure, 29@30c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Market active. We quote ½ lb. combs 30c. per lb.; 1 lb. combs 22@25c.; 2 lb. combs 20@22c. Extracted, in half bbls., 12@14c.

BEESWAX—Prime quality, 25c.

CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—Sells very readily in 1 lb. sections at 21@22c. for best white, and 19@20c. for 1½ to 2 lb. Second grade, 1 lb. 18@20c.; and 2 lb. 17@19 cents. Extracted is selling very slowly at 12@14c.

BEESWAX—25@28c.

A. C. KENDEL, 115 Ontario Street.

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

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Examine the Date following your name on the wrapper label of this paper; it indicates the end of the time to which you have paid your subscription on the BEE JOURNAL.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

Kendall's Spavin Cure is used from the Atlantic to the Pacific coast.
40w4t

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

EXTRACTED AND COMB HONEY WANTED—for which I will pay the highest **Market price.** Correspondence solicited.
W. G. WATKINS,
41w4tp 172 22nd Street, **CHICAGO, ILL.**

SWEET CLOVER SEED.
500 POUNDS for Sale at **25 cents** per pound
41w1tp BEN CLENDENON, Grinnell, Iowa.

NOTICE.

As I do not sell honey on commission, and buy only such kinds as I need in my line of trade, I cannot accept any shipments without previous correspondence.

I can sell Beeswax of any quality, and will pay the regular market price for it, in any quantity, or exchange for it comb foundation, without previous correspondence.

ALFRED H. NEWMAN,
40wtf 923 West Madison Street, Chicago, Ill.

GERMAN CARP,
For stocking ponds, Goldfish, Silver Pearl, Fringe Tails, Golden Orfes, etc. For particulars, address
MUTH & ECKARDT,
37wst Mt. Healthy, Hamilton Co., O.

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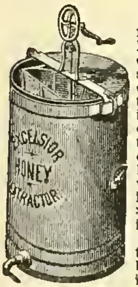
Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

EXCELSIOR HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13 inches	$8 00
For 2 Langstroth "	10x18 "	8 00
For 3 " "	10x18 "	10 00
For 4 " "	10x18 "	14 00
For 2 frames of any size,	13x20 "	12 00
For 3 " "	12½x20 "	12 00
For 4 " "	13x20 "	16 00

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GOLDEN ITALIAN QUEENS.

1-frame Nucless, with Tested Queen	$4.50
2-frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1..	2.50
" " per half doz., after July 1	13.50

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DR. I. P. WILSON,
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SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book.

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For the past few years I have made this excellent food my leading article. Having the best established reputation in this city as a dealer in PURE HONEY direct from the Apiaries, enables me to obtain the highest market prices. Your consignments and correspondence respectfully solicited.

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Successor to Conner, Burnett & Co.,
28w13t 161 So. Water Street, Chicago, Ill.

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If you want cheap bees and hives to suit, good Cyprian, Albino or Italian Queens, Comb Foundation, all kinds, Section Boxes, and everything a live apiarist needs, send for prices.

Full Colonies and Nuclei a Specialty

with good young Queens Give me a call, friends, and I will try and please you. (Box 819)

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5wly Belleville, St. Clair County, Ill.

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

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I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.

14w39t **J. S. TADLOCK.**

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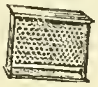
COMB FOUNDATION,



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Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

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I wish to buy a quantity of good yellow Beeswax. I am paying **25c.** per pound, delivered here, Cash on arrival. Shipments solicted.

To avoid mistakes, the name of the shipper should always be on each package.

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Our Motto is:

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Italian Queens	$1; Tested	$2
Cyprian Queens	$1; Tested	$2
Palestine Queens	$1; Tested	$2

Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1wly.

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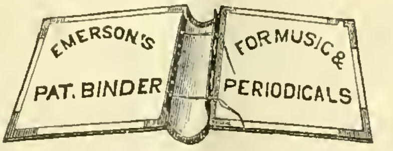

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Bees & Honey

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Management of an Apiary for Pleasure and Profit; by

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It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents**; in paper covers, **50 cents**, postpaid.

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Appreciative Notices.

Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

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WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
1wly Hamilton, Hancock Co. Ill.

We now quote an

Advance of 5 Cents per pound

on the PRICES PRINTED IN OUR CIRCULARS, wholesale or retail. 15wtf

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The manufacturers of Comb Foundation have advanced the price 5 cents per pound, owing to the increased cost of Beeswax.

Until further notice, the price of all the styles and kinds of Foundation, except the VanDeusen (flat bottom), will be

Advanced 5 Cents per pound,

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Excelsior Dunham and Vandervort *FOUNDATION.*

Owing to the large advance in the price of wax, I now quote prices thus: Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

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Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

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SWEET CLOVER SEED,

This year's crop, all of the white variety, 28c. per pound; $3.75 per peck; **$13.00** per bushel.

☞ I can fill no more orders for Queens this fall, having sold all I had to spare, leaving many orders unfilled, and with orders still coming in. The advertisement in the Weekly Bee Journal did it.

I. R. GOOD,
5wly Nappanee, Elkhart Co., Ind.

New Kegs

FOR HONEY.

In order to satisfy the demand for small packages for Extracted Honey, I have heretofore procured kegs intended for syrup, fish, lard, etc., and in view of this growing trade, I now feel justified in having made to order a **Special Keg**

Designed Expressly for Honey.

These I am obliged to buy in large quantities in order to supply them at popular prices, and procure a package not used for any other purpose. They are made of Norway Pine, and have from 7 to 9 chine hoops on each end.

I have tested a sample keg by filling it DRY with white clover honey, and without the heads being painted.

It neither leaks nor flavors the Honey.

It is not necessary to paint the heads, but when painted I will guarantee them not to leak, and if well scalded, the pine **will not flavor the honey.**

Capacity, 175 pounds........Price, 80c. each.

The first car load of these kegs will arrive about Sept. 1[illegible]th, and all orders will receive my prompt attention.

The 5 and 10 gallon kegs will be sold, as heretofore, at 40c. and 55c. each, respectively.

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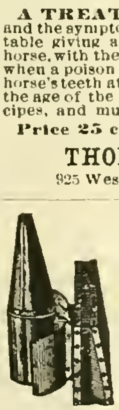

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Circulars free. Address,
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OR,

MANUAL OF THE APIARY,

By A. J. COOK,

Of Lansing, Professor of Entomology in the

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320 Pages; 133 Fine Illustrations.

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This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

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Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—*L'Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—*British Bee Journal.*

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYNKOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—A. E. WENZEL.

My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—WM. VAN ANTWERP, M. D

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Bulletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

—:o:—

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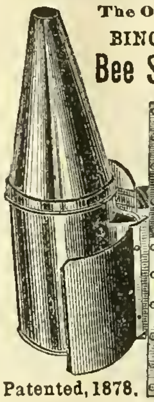
Who will be the first to copy?

The Original BINGHAM Bee Smoker

25,000 IN USE.



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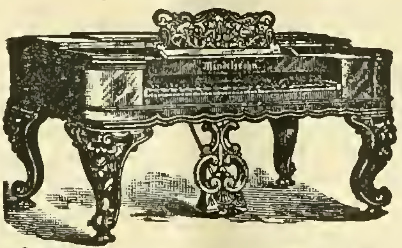

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THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

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Vol. XVIII. Chicago, Ill., October 18, 1882. No. 42.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.................................. 657
Enthusiastic.................................. 657
Another Bee Paper Dead.................................. 658

Among Our Exchanges—

Apiculture in Palestine.................................. 658
The Honey Harvest in Switzerland.................................. 658
Fraudulent Uses for Glucose.................................. 658

Correspondence—

Wintering Bees Successfully.................................. 659
Bee-Keepers Visiting One Another.................................. 660
Shipping Bees to Australia.................................. 660
Bee and Honey Show at St. Louis.................................. 661
How I Managed my Bees.................................. 661
Use of Onions when Wintering Bees.................................. 661
Bee-Keeping in Utah.................................. 661

Convention Notes—

Local Convention Directory.................................. 662
The National Convention.................................. 662
Convention Notices.................................. 665
Visit to Mr. J. S. Hill's Apiary.................................. 665

Selections from Our Letter Box—

A Land Flowing with Honey.................................. 665
Bees in Kentucky.................................. 665
A Large Yield.................................. 665
Few Bee Men There.................................. 665
Another Good Report.................................. 665
Very Well Paid.................................. 665
Food for Shipping Queens.................................. 666
Yellow Variety of Sweet Clover.................................. 666
No Surplus Honey.................................. 666
Botanical.................................. 666
Wonderful Success.................................. 666
Almost a Failure.................................. 666
Bee and Honey Show at St. Joseph, Mo.................................. 666
An Excellent Report.................................. 666
Well Done.................................. 666
Sections, Frames, etc.................................. 666
Lady Bee-Keepers.................................. 667
An Extraordinay Season.................................. 667
A Heavy Day's Work.................................. 667
Doolittle's Opinion of the Monthly.................................. 667
Well Pleased.................................. 667
Honey Season in the Southern States.................................. 667
No Fall Honey Yet.................................. 667
Sweet Clover, etc.................................. 667
4680 lbs. of Surplus from 23 Colonies.................................. 667

Enthusiasts.—The Cincinnati, O., Daily *Gazette*, speaking of the National Convention of Bee-Keepers, lately held in that city, says: "It would be difficult to find a body of men more enthusiastic than the North American Bee-Keepers' Society, as it assembled in Washington Park Hall, at 9 o'clock, yesterday morning, for the closing exercises of the Convention of 1882. So enthusiastic were they, indeed, that when a vote upon the subject was taken, it was unanimously decided not to adjourn for dinner, but to take a recess of ten minutes only." If they suffer with dyspepsia hereafter, they should charge it to enthusiasm! Ten minutes for dinner is worse than the railroads treat their passengers. Let us have more time and less enthusiasm hereafter. The *Gazette* then gets enthusiastic and says: "That the growth of bee-culture has been enormous is shown by the fact that in 1870 barely $1,000,000 was invested in the pursuit, while in 1879 the profits were estimated at $16,000,000 in the United States alone."

☞ We had a call from Mrs. A. J. West, of Paxton, Ford Co., Ill., on Friday last. She is intelligent and very lady-like, and says Mr. West started in the spring with 9 colonies, which gave an average increase of 3 swarms. From 1 colony he has taken 241 pounds of honey, and it has enough left for winter. The total product of the 9 colonies, spring count, has been over 1,400 pounds. The season has been very favorable and, with Mr. West, bee culture has met with its full reward.

☞ Mr. and Mrs. F. F. Collins, of Houston, Texas, made us a pleasant visit on Saturday last. Mr. Collins says he is so much engaged with his manufacturing business that he can now pay but little attention to his bees. He has about 100 colonies, but his brother is taking care of them for him. Mr. Collins is an enthusiast on bees and regrets his inability to be with them more.

☞ Mr. W. F. Clarke, late editor of this paper, has gone to Winnipeg, Manitoba, to take editorial charge of the *Winnipeg Sun*. He thus wrote to us concerning his leaving his former home at Listowel, Ontario:

> My friends in Listowel gave me a good send-off. A surprise party headed by the Mayor, visited me the night before my departure and presented me with a farewell address, and a beautiful gold hunting-case Elgin watch, engraved on one side, "Presented to W. F. Clarke, by his Listowell friends, on his departure for Winnipeg, Sept. 25, 1882," and on the other, with the letters, W. F. C., in large and handsome monogram.

☞ We learn, with regret, that Mr. Frank Benton, who is now in Beyrout, Syria, has been quite sick during the past summer, and has been unable to rear as many queens as he anticipated, on account of the extremely unfavorable weather.

☞ Mr. James Heddon's essay for the National Convention was lost in the mails. This explanation is due to him, as it was not there produced.

☞ As the time for the usual winter rush of correspondence is nearing, let us try to impress on our correspondents the necessity of being careful when writing to this office. If they live near one postoffice and get their mail at another, be sure to give the address we have on our list.

Another Bee Paper Dead.

The Bee-Keepers' *Instructor*, published at Somerset, Ky., for September is just received, and the editor, Mr. W. Thomas, announces that it is not paying him, and will not be continued any longer. This is the second that has died within 6 months.

A year or two ago, there was a regular mania for starting bee-papers, and as a result several of the weakest are now *dead*, and some others are quite weak, and one at least has not yet issued a number for September. The editor of the *Instructor* says:

> With this issue the *Instructor* closes its existence, and hereafter will be numbered with the things that were. We much regret to make this announcement, and know there are others who will regret it also; for during its existence the *Instructor* has made many warm friends who will miss its accustomed monthly visits. We find, however, that it is not paying us—and has not during the two years we have had control of it—for the time, labor and money expended upon it. We are now, as we always have been, publishing it in connection with a weekly paper, and find that, owing to the pressure of other duties, we cannot continue its publication without increasing our office force—something we do not feel justified in doing. During the time it has been in our charge we have lost no opportunity of improving it whenever it could be done, and think that in quality of contents, typographical appearance, and general "make-up," it will now compare favorably with any of the other bee publications. Our support, however, has not kept pace with the improvements, and will not warrant us in continuing it at its present standard; so rather, than issue a second or third rate publication, we prefer to drop it altogether.

Unfilled subscriptions will be filled by the Bee-keepers' *Guide*.

The *Instructor* was a good paper, well worth double its subscription price, and had it been published at that figure, would probably have lived much longer. Any paper published for less than a paying price, must sooner or later "succumb to the inevitable," and *die*.

◆

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

AMONG OUR EXCHANGES

MISCELLANEOUS.

Apiculture in Palestine.—The *Bienen Zeuchter*, of Alsace-Lorrain, gives the following from Jerusalem, which will also interest our readers:

> Mr. Meyer, the venerable curate of Dingsheim, writes to us from Jerusalem, May 19th: "Apiculture is much neglected in this country. Bees which do not live wild are kept in tubes of baked earth, 16 to 18 inches long, 8 inches in diameter, and closed at one end. When a swarm has been lodged in one of these, the other end is closed with a wooden lid provided with an opening to let the bees in or out. The hive thus fitted up is set up under some poor shed. When August comes and the honey is wanted, the poor bees are smoked and smothered. An Arab offered to sell me his hives at 4 francs each. The father of the congregation of Notre Dame de Sion will deem it a duty and a pleasure to make Alsacian hives. In August, when the poor bees will be suffocated, he will buy combs to house swarms in movable-frame hives. Thanks for Bastian's Manual, which I brought with me, we will introduce here a sensible way to keep bees upon the more progressive plan, and thanks to the intervention of Mr. Zwelling, thousands of bees will hereafter be saved from the sad end which awaited them. I forward with this a few of our Palestine bees; they look very much like the Italian, but are longer in the waist. I admire their industry—always at work from 4 in the morning till 7 at night."

◆

The Honey Harvest of Switzerland.—From the August number of the *Bulletin of Apiculture* for Italian-Switzerland, we extract the following:

> The first honey crop in Switzerland was generally weak, except in a few localities of the plain, but the second, alas! has been everywhere almost or altogether nothing. Thus, in our apiary at Gryon, which had given us 550 kilog. last year, we have not been able to procure more than about 40 kilog. Mr. J. Jeker, at Sabingen, fares still worse, for his colonies have not only yielded nothing, but he will have to give them from 200 to 300 lbs. of sugar. From Friburg the reports are lamentable. Mr. B. De Vevey writes that in July colonies have starved to death, and that he and his neighbors can only keep theirs by feeding them largely. For many years we have not had a season like this. Our three apiaries, which last year gave us nearly 3,000 pounds, will not yield this present year more than 1,200, from about an equal number of colonies, and we class ourselves among the more fortunate.

Mons. Bertrand, the editor, remarks as follows regarding sweet clover as a honey-producing plant:

> We have received, concerning the white melilot, two communications, which confirm all we have said about it these few years past. Mr. H. is delighted with it; he has 8 acres of it, and his estimate is that during the whole of every day three or four colonies are gathering from this field. I was there in the evening, and they were still buzzing. Plant with it all the land you can.

◆

Fraudulent Uses for Glucose.—Mr. L. D. Younkin, in the West Branch, Iowa, *Record*, gives the following on glucose:

> A solution of glucose is often mixed with honey and sold as honey. Those buying honey that has been shipped from the East are often deceived by this adulteration. The principal gain is to the man who sells his glucose water for 15 or 20 or 25 cents per pound. Pure honey will become candied if let stand for a time, and when you see a bit of honey comb swimming about in a liquid syrup of brownish color, be not deceived, for it is likely to be glucose water with a little honey in it.
>
> Glucose is also used extensively in the manufacture of candy. Excepting in liquors and beverages, there is no worse and more objectionable article made from it; not because of the glucose that is in it, but other stuffs, some of which in larger quantities would be poisonous. Candies are very much adulterated and should be eaten sparingly. Glucose is used in the manufacture of beer. This requires one third less barley. It is used in whisky, brandy and many wines. A little rain water sweetened with brown sugar (glucose), to which is added a third or equal quantity of alcohol, makes a coarse article of "rot-gut" whisky. Glucose is used in the manufacture of the these liquors because it is cheap and the process is rapid compared with the old way, and then because glucose will ferment, pure sugar will not.
>
> All of these liquors thus make are very inferior articles. It is this that has been so much condemned as the adulteration of liquors.
>
> From the fact that glucose ferments and sugar does not, brown sugar (glucose) should not be used in preserving or canning fruits, yet this difficulty cannot always be obviated, for pure sugar is turned to glucose when boiled with any acidulous fruit and is then liable to ferment.

◆

The Ladies' Floral Cabinet, New York ($1.25 per annum), in its October issue presents some choice reading for lovers of flowers. The literary and household departments have fresh and bright, as well as useful articles.

◆

☞Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

CORRESPONDENCE

For the American Bee Journal.

Wintering Bees Successfully.

JAMES HEDDON.

MR. EDITOR—In order to reply to a larger number of letters than I am able to answer privately, allow me to add still another paper to the great number already written by myself and others upon this subject.

I think that nearly all will agree, that aside from the disease known as "dysentery," "bee cholera," "diarrhœa," etc. We have little to fear in regard to successfully wintering our bees.

A knowledge of the cause of that disease or ailment, as any and all may choose to call it, would be of great aid in pointing out the cure, and with that fact in view many of us have thrown upon the eyes and ears of the apicultural world, theories and hypotheses, some of them seeming to bear very close relation to all the effects connected with the death of our bees. Yet none are satisfied of the true cause, and hence none have mapped out any practical, sure preventative.

Of the 14 years that I have wintered bees, with all sorts of results—my colonies numbering from 33 to 500—not one winter has passed, without a series of experiments and observations. I now fully believe, that I can winter colonies of bees with as much certainty as I can a horse or a cow.

But before any may take too much courage from the above statement, I wish to say that in my opinion the expenditure of time and money is greater than the risk we run, when our bees are prepared in the cheap and practical manner, I am about to describe.

The best methods of out-door and in-door protection have many advantages peculiar to themselves. In this latitude 42°, and South and West of us, bees often fly more during a large portion of our winters than many bee-keepers suppose. On account of the benefit of these flights, of pure air, the warmth and life-giving elements of the sun's rays during winter, and the fact that packing is of great benefit during the early working days of spring, I favor the out-door packing system of wintering.

The chaff-hive has a good winter record, but I have found that to get this record, it is not necessary to use hives that one cannot alone handle to advantage, and that he must lift every upper frame out, one at a time, in order to get at one of the lower frames.

I have further learned that where only eight Langstroth frames are used instead of ten, such a hive is, not only the best for the storing of surplus honey in summer, but that the winter stores it contains, will be much more accessible to the cluster of bees during protracted periods of cold. In this locality, we do not in any fall, find one colony in 25 short of winter stores, or find those stores in a false position in the hive. If we find any short of stores it takes only 24 hours time to give them 25 pounds of liquid feed, through our feeders, and they will put it in a proper position in the hive.

Now supposing that the hive is all in suitable condition in the breeding apartment, we proceed as follows:

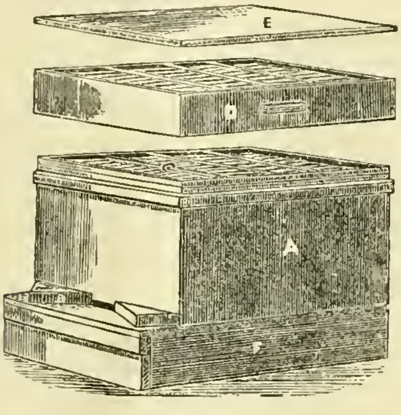


FIG. 1.

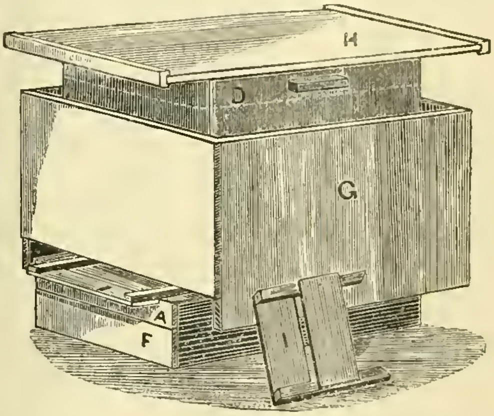


FIG. 2.

Fig. I, represents my modification of the 8 frame Langstroth hive, with one of the tiering cases shown. This case, D, being made to hold 28 4¼x4¼x1¾ sections, without tin separators, or 24 4¼x4¼x2 sections with separators, is just 4⅝ inches deep. This depth I believe to be more than ample for top packing. The honey board, C, is composed of a narrow outside frame, with 9 slats running from end to end, and the side and end pieces (outside) and 3 cross pieces, are ⅜ inch higher than the slats, thus making a ⅜ sink in the 4 centers of the board. It is turned over for winter (thus creating a space of ¾ over the tops of the frames), enabling the bees to better pass over the frames of comb, to get at plenty of honey at all times

Over this honey board, or rack, we spread a piece of burlap, and on this we place one case, empty. This case we fill with chaff, or what is just as good, planer shavings, or forest leaves. It is hard to find an apiary, where one of these heat-saving absorbents are not abundant. Now place on the cover, E, with four shingle nails under each corner of it. The space thus created, is large enough to let out all moisture and not let in mice.

Now, we have packed the top of our shallow hive, and given it all the outlet for dampness needed. Now by the aid of Fig. 2, we will describe how we protect the sides; in the simplest and cheapest manner. A, shows the end of the permanent bottom board to the hive. F, the stand the hive sets in. D, the case as filled, as above described. H, our summer shade board. I, the winter bridge composed of 4 pieces, 1 piece 11½ inches long (the inside width of the hive) by 3x⅜, and the others 11½x4x⅜, and the side pieces, each, ½x⅞x9. Now, let us proceed to push this bridge in its position, the points into the entrance, the piece marked I, outside for an alighting board, and the other piece, forming the bridge, to keep the packing out of the bee's passage-way. G, is a rim made of rough lumber, being 6, 8 or 10 inches larger, inside measure, than the hive is, outside measure, thus giving 3, 4 or 5 inches of space on all sides, to fill with packing. Sawdust preferred by me, and sawdust fresh from green logs does well, and soon dries out.

You will see by the engraving that the sides and back end are wider than the front, and they may be enough wider to come down to the ground, or no farther than shown in the engraving, as may be preferred. The hive being ten inches deep, the front end of our rim is represented as being about 12 inches, and the sides and back pieces about sixteen inches wide; any old "cull" lumber will do for this rim. When we use them as shown in the engraving, we fill in the dust till it banks up on the ground, and thus stops running down, and soon fills up. We press it snugly and fill up to the top of the rim, and the dotted line shown about two-thirds of the way up the case; this line being about 2 inches higher than the top of the rim. In a windy situation I would advise having the rim made wide enough to come to the ground at sides and back end; here we do not need it, as we have but little wind within our 8 feet board fence, and saw dust is plenty. Straw, chaff and leaves or almost any thing can be used to pack with.

Now adjust the shade board, H, as shown in the engraving, to keep the snow and rain from the packing. This board is 2x3 feet, and any moisture that drives into the top of the saw dust will dry out before it gets one inch deep; no dampness will arise 2 inches above the ground. I place a 15 lb. stone on the board to hold it there; this stone I use both in winter and summer, and it is clean and convenient to handle. We open our bees but very little between the time of packing in the fall and unpacking late in the spring, and when we are warned by outside appearances that something is wrong within, we take a bushel basket, and take out the sawdust at the top till we are below the top of the brood-chamber; by lifting the honey board or rack, the whole upper part is removed at once, and our bees examined, and aided, if any help is needed, and all replaced in a moment. You will see that though we accomplish a most thorough system of winter protection against cold and dampness, we do it, with the extra use of only 1 piece of cloth, the little bridge and the 15 or 16 feet of rough lumber in the rim, G.

Since I have been a bee-keeper, I have wintered bees in the following different ways, on quite an extensive scale: in the cellar; let alone, outdoors; put in clamps, above the surface level; in house apiary, with several modifications; in three different double-walled houses; packed in horse manure; flown in cold frames; fed with sugar, and almost every experiment, I could hear or think of; and my present opinion is that whatever the cause of this dysentery may be, its influences against us are much lessened by the system of protection in winter and spring, described in the foregoing. I feel that chances of any serious loss in winter, are now drawn to such a limit, that no further guard against it, pays its cost. I have tried to give such lucid description of the above method as would enable those who use a different style of hive, to make such slight variations as are needed to adapt the principles to it.

Dowagiac, Mich., Sept. 22, 1882.

For the American Bee Journal.

Bee-Keepers Visiting One Another.

W. T. STEWART.

Messrs. Jones, Clark, Demaree and others have given accounts of their visits, among other bee-keepers, which have been very interesting, and now I too have been on a visit to see a brother bee-keeper and will report.

Two years ago Mr. G. W. Knight, of Ballardsville, Ky., came to me asking how to keep bees scientifically, saying he had some bees, but knew nothing about the business, having never read any works on the subject, I loaned him one volume of the AMERICAN BEE JOURNAL besides telling him as best I could, how to proceed. Several times since Dr. Drane and I have "given him lessons" and prevailed on him to subscribe for the BEE JOURNAL. Dr. Drane and I sold him some Italian queens to start with and now I have paid him a visit. On entering his apiary I was so completely "taken in" that I have hardly gotten over it yet. Such an apiary in so short a time, and that too by a novice. He has 40 colonies, all in tip top condition; everything as neat as a pin; the best of hives, well painted, and no two hardly of one color. Bees were storing honey in boxes on every hive, in good style. He has the prettiest apiary I have yet seen. In a few years you will find him away up among the most progressive bee-keepers of the age.

That visit richly paid me; where shall I go next? I believe many bee-keepers could not spend a few days, or dollars, better than in visiting each other; every visit will learn us something useful, and then it is a real pleasure besides.

Now a few words concerning my own prospects, I have moved from town, four miles in the country, and taken in, as a partner, Mr. M. B. Moody, who knows but little about bees, but he owns nearly a thousand acres of fine land, mostly well set in pastures, and we are going to plant for honey on a large scale. Besides, we are in the small-fruit and gardening business and such another home-made location for bees and honey will be hard to find in this country; with no other bees near, we shall be able to keep our bees pure. We want no Cyprians; give us pure Italian bees, plenty of figwort, motherwort, catnip and melilot, and a good season, and we will risk the rest, for a big report.

But, Mr. Editor, don't ask me for a report, this year. I tell you what I have got "to get:" two barrels of coffee A sugar, to winter our bees on. That's my report.

Eminence, Ky., Oct. 1, 1882.

For the American Bee Journal.

Shipping Bees to Australia.

S. MAC DONNELL.

On 22d of July Mr. Alfred H. Newman of your city, shipped to me, via San Francisco, an assortment of six queens, in four-frame nuclei. The queens were described as follows:

No. 1. A homebred American Italian.

No. 2 and 3. Prize queens.

No. 4. A Syrian queen mated with an Italian drone.

No. 5 and 6. Imported Italians.

The bees arrived on 25th ultimo by the steamer "Lealandia," and no time was lost in getting possession and giving them a fly. I ordered this assortment on joint account with a friend and we were both much pleased on inspection to find that the queens were all alive. The quantity of dead bees was very large, and in many cases the surviving bees were much exhausted, in fact their general condition was not as good as that of the bees which Mr. Newman sent me last year, although in the present case the bees were immured for 35 or 36 days only, and in the former for 42 days. I attribute the difference in condition to the entrance having been closed, whereby the portico of the Langstroth hive was not made available as a promenade for the inhabitants. Immediately the bees were allowed to fly they exuded their feces, plentifully spotting the entrance. This did not occur last year, when, during a longer term of incarceration, the condition of the surviving bees were far better, and there was no visible dropping of feces on the first flight. Then the bees had access to the portico, covered by wire cloth.

I won the toss for first choice, in which I was guided by the manager of the Italian Bee Co., Mr. Abram, an expert holding excellent credentials from Dathe and other celebrated German bee-men. For 1st, 3d and 5th choice I selected respectfully Nos. 2, 1 and 5, and my friend Nos. 3, 4 and 6.

The exhausted condition of the bees was so much against their building up into good colonies that I united my three with three black colonies, so far successfully.

All the larvæ packed in the nuclei had not hatched out. There were no signs of their having been killed, but there were signs of foul brood.

These particulars may be useful to those having to send bees long distances.

Sydney, Australia, Sept. 1. 1882.

[Mr. A. H. Newman informs us that the nuclei were prepared by putting a partition, or division board, in the center each of three 10-frame Langstroth hives; the entrances were entirely closed, but a thorough ventilation was provided, by tacking wire cloth over the entire hive; following this were three wooden strips nailed crosswise over the top of the hive, which left about one-half of its upper surface comparatively open; a cotton cloth, doubled several thicknesses, was then wet and tucked under one of the wooden cross strips. Instructions were tacked on each hive to wet this cloth frequently on the trip. Probably too much water was used in this operation, or the brood may have been chilled, and the bees being constantly in confinement, could not remove it, but left it to putrefy in the cells.

For extended journeys, a chamber above is preferable, which gives the bees an opportunity to escape from the combs in case of accident. With the portico covered with wire cloth and the entrance left open, the queen and most of the bees are very liable to desert the brood chamber, when unduly excited, and cluster in the portico, where they soon chill; upon attempting to re-enter the hive, the entrance quickly becomes obstructed and the bees outside perish from starvation or other cause.—Ed.]

For the American Bee Journal.

Bee and Honey Show at St. Louis.

E. T. FLANAGAN.

The great St. Louis Fair has just closed, and was a grand success. There were over 25,000 persons on the grounds on Thursday, and it seemed as if they all visited the "Honey and Bee" department. Hundreds told me they came to the fair only to see the bees and honey, and learn something in regard to modern, progressive bee-keeping. The interest manifested was unprecedented, and was unabated from the opening, on Monday morning, till the close, on Saturday evening. Bee-Keepers from all parts of the country were there, all inquiring about the improved methods of manipulating the hive, making and using comb foundation, sections, etc., the relative value of the new races of bees now being introduced, etc.

I took down the names of over 550 *bona fide* bee-keepers, and a great many promised to take the Bee Journal at the beginning of the year; but few of our prominent bee men were on the grounds as they were all probably at the Cincinnati Convention. I heard Judge Andrews, of Texas, was present on Monday, but, unfortunately, I did not make his acquaintance.

Mr. Armstrong, of Jerseyville, and Mr. Barber, of Bloomington, Ill., had exceptionally fine displays of honey, and the former obtained a full share of first premiums, and deservedly, too, as his display would be hard to excel.

The Fair managment were pleased with the display, and seem disposed to deal more liberally in the future with the bee-keeping fraternity, and I am sure they can afford to do so, as it will do much to develop a growing industry, for which Missouri is well adapted, but in which, at the last and greatest fair ever held, and which is really a National institution, she had not an entry, and her sister State of Illinois carried off all the premiums.

Belleville, Ill., Oct. 9, 1882.

For the American Bee Journal.

How I Managed my Bees.

D. HIGBEE.

The season of 1882 is over, so far as the labors of the little busy bee are concerned. To me, the year has been satisfactory, though I am only engaged with bees in a small way.

I started in the spring of 1882 with 5 hybrid-Italian colonies and two nuclei. I sold one colony in July for $10. and increased to 17, and took over 800 lbs. of comb honey. The most of which has been sold at 25 cents per pound at home. The nuclei were very weak and drew heavily on the colonies to build them up. I offset them in the count against the colony I sold, and therefore call spring count 5 colonies which would give me a yield of honey for each (spring count), 160 lbs. comb honey or $40 each, besides the increase of colonies.

I use the 2-story Langstroth hive. I put the top stories on when the dividing was done and the bees were all equalized, and each was full below. Then I put on the upper stories and raise to the upper story one-half of the frames from below, and put in frames above and below, empty frames alternating with full ones. This started the bees with a boom above as well as below. In ten days I returned the old frames to their places below, and put the new combs all above. I never saw bees work faster than they did to finish up the combs above, but I found that the queens would work both above and below, and I was troubled till September by brood in many of the combs above, that I designed for surplus—causing some of the combs when filled, to be dark and unsalable. I used a few 2-lb. sections; these generally were foundation and were free from brood but not uniform in shape.

This is comparatively a new business to me. If any one will tell me how, with the Langstroth hive, to still get the same quantity of honey but in better shape for market, and the quality to be of the first grade, they will help me out of my difficulty. Perhaps I should have used separators. I will never be satisfied until my honey shall be both in shape and quality first class, and if possible a large yield.

Avoca, Iowa, Oct. 10, 1882.

For the American Bee Journal.

Use of Onions when Uniting Bees.

PROF. S. J. ROBBINS.

I am exceedingly interested in letters published asking and giving information; oftentimes the very questions answered are the ones I would ask. Last year, in reading some of the discussions at Bee-keepers' Conventions, (I do not remember which one) one gentleman said, in uniting bees, he took slices of raw onions and put in the colonies to be united, the night before, and the next morning put them together. The bees all smelling of onions, there was no fighting. I have done this repeatedly with the best of success and I desire to thank the gentleman, although I don't remember his name, for it has been worth much to me. Last month I received two beautiful dollar queens from Kentucky. After receiving them I put them into Peet combination cages and having secured two black queens I placed a caged Italian in each queenless colony. After two days I examined and found one of the queens liberated and all right; the other I found in the cage dead; also the bees that came with her. There had been no effort to liberate her. We had a small nucleus in the yard, and Mrs. R. put a piece of onion in it and a piece in the hive with the dead queen. After two or three hours, the comb from nucleus with queen and bees were put in the hive and "everything went merry as a marriage bell." No disturbance among the bees; and the queen went right along as though she had always been there. Now if bees go entirely by scent, why not make the queen and bees smell like onions, and put them in without any cage? Will any one tell us if they have tried this? Why did the queen and bees die that were caged on a comb where they could get honey and should have lived a long time, even if the bees did not liberate them? We have had a very poor season for bees about here; scarcely any surplus honey, but they have a plenty for winter.

Penfield, N. Y., Oct. 6, 1882.

[They were evidently exhausted or fatally injured by the journey in some way.—Ed.]

For the American Bee Journal.

Bee-Keeping in Utah.

JOHN DUNN.

I like the Bee Journal very much, it is of much benefit to me. I have taken from my bees this year, up to the present date, 30 gallons of extracted honey (we don't go much on comb honey), and still the bees are at work every day it does not storm; we have had a few cold storms that has kept them in. The mountains are dressed now with part of their winter covering; the leaves are turning yellow and red, and are beautiful to look upon, if we are only prepared for the cold embrace of "King Jack." I find quite a lot of young brood in all 7 hives, and am only able to take off one top box. I had only 3 hives with them on; the other 2 I was not able to take off, for when I took the frames of filled honey, in them, the bees would cluster on the sides of the box, so that I gave them some empty frames to cluster upon and will let them rest until I prepare them finally for winter. There is a plenty of surplus honey left in the hives to last them for the winter. I have taken more honey from one hive top in one week than some of the bee men have taken for a whole year. I intend to give it more of my time, so that I can get more honey than I have done even this year, if I should not lose all, as I did last winter. The bees are now in better condition, and they are better bees. Italians have proven themselves to be the best, and I have given to bee men here many queens, when I should have been looking after honey, but I am satisfied that I have done my own share of improving my neighbor's stock, and would have been pleased if I had been able to have done more. I have found 2 fertile queens in one hive, apparently at home, for when I undertook to take one out, I had to cage quite a number of bees with her, and they fed her before they could be forced to leave her.

Toole, Utah, Oct. 3, 1882.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Oct. 18, 19—Northwestern, at Chicago, Ill.
C. C. Coffinberry, Sec., Chicago, Ill.

18, 19—Southern California, at Los Angeles.
J. E. Pleasants, Pres., Anaheim, Cal.

21—Northern Ohio, at Norwalk, O.
S. F. Newman, Sec., Norwalk, O.

Nov. 1—New Jersey & Eastern, at New Brunswick.
J. Hasbrouck, Sec., Bound Brook, N. J.

3.—Iowa Central, at Winterset, Iowa,
Henry Wallace, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

THE NATIONAL CONVENTION.

The 13th Annual meeting of the North American Bee-keepers' Society, met at Cincinnati, O., on Friday, Oct. 3, 1882, and was called to order at 9:30 a.m., with Prof. A. J. Cook, of the Agricultural College of Michigan, President of the Society, in the chair. Dr. Ehrick Parmely, of New York, the Secretary of the Society, being absent, Mr. A. I. Root, of Medina, O., was chosen Secretary pro tem.

On the front of the stage were arranged a number of improved implements for bee culture, consisting of hives, smokers, extractors, foundation machines, and numerous samples of honey.

The Vice Presidents reported as follows:

D. A. Jones said the honey crop of Canada is not over 50 per cent, and is dark and not up to the standard. Many colonies will have to be fed: he had purchased 50 barrels of granulated sugar for feeding this fall.

Judge Andrews reports an excellent crop from Texas. He has 125 per cent of an increase, and an average of 100 lbs. of honey per colony.

Dr. C. C. Miller, of Marengo, Ill., started, last spring, with 174 colonies, increased to 202, and obtained 15,000 lbs. of comb honey in 1 lb. sections.

Dr. J. P. H. Brown, placed the honey crop of Georgia at about 26 lbs. to the colony. One colony yielded 350 lbs. of extracted honey.

Mr. J. C. Peden, of Kentucky, reported that the prospects in his section, at the beginning of the season were excellent, but the cold and rainy weather in the middle of it had cut the crop short, being only an average of about 15 to 20 lbs. per colony.

Mr. Wm. Williamson, of Lexington, Vice President from Kentucky, made substantially the same report.

Dr. O. M. Blanton, of Greenville, Miss., reported great success of the Mississippi bee-keepers. One had 3,745 pounds of comb honey and 1,500 pounds of extracted honey. He himself had 256 colonies of bees, and had 23,000 pounds of extracted honey, besides some 600 pounds of comb honey. A gentleman living across the river from him in Ark., had received 538 pounds of extracted honey from one hive alone. The Doctor had observed that his bees gathered a very good quality of honey from sorghum and the tassels of Indian corn.

Mr. C. F. Muth reported that the finest honey he had secured this season was from Florida, and that he was informed of an enormous yield there.

Mr. O. O. Poppleton said that he estimated the average yield for Iowa to be 75 lbs. per colony, and the season had been a prosperous one for bee-keepers generally.

Mr. C. Grimm, had reports from 25 bee-keepers of Wisconsin, who had 3,025 colonies of bees, an average yield of 60 lbs. of surplus per colony, being 181,500 lbs. from them all. The increase is 80 per cent. Wisconsin has 50,000 colonies of bees, but his report is only from 3,025 or one-sixteenth of the whole.

W. M. Vinson reported from 22 bee-men of Dakota, only a half crop; 267 colonies gave only 10,982 pounds of surplus.

Jonas Scholl said bees in Indiana had done well for themselves, but not for their owners. Much increase but not over 10 lbs. of surplus per colony.

Mr. Vandervoot reported a very peculiar season in Pennsylvania. The outlook had been good, but cold weather in July had done such damage that he had been compelled to feed bees to keep them from starving. The yield of buckwheat honey was good, but the general yield small in all portions of the State. From 175 colonies he had an increase of 12 swarms, and an average of 20 to 25 lbs. of honey per colony.

Mr. Morehouse, of Michigan, said bees in his section had wintered well and the fruit bloom yield had been immense. He had noticed greater production from swarms than from old colonies. The average yield of honey was about 40 pounds per hive.

Mr. E. T. Lewis, of Toledo, reported a very extraordinary yield in Southeastern Michigan and Northeastern Ohio.

The President had found the increase of bees in Central Michigan to be about 150 per cent, and the surplus honey at about 80 pounds per colony.

Mr. J. M. Hicks, of Indiana, reported that he had averaged 500 lbs. of honey per colony on alsike clover, and J. C. Carroll, of Dallas County, Texas, through a friend, reported from one of his Cyprian colonies a yield of 1,000 lbs., which was declared to be the largest yield ever known.

Mr. F. Della Torre, of Maryland, exhibited a small bottle of colorless honey from his apiary near Baltimore, which, he stated, was readily sold there at 35 cents per lb., and that he was unable to account for its want of color, but that its consistency was good and its taste delicious. The exhibit excited much comment.

Mr. H. L. Jeffrey reported that Conn. has about 80,000 colonies of bees, of which 95 per cent are in box hives, etc., and two-thirds of them have not honey enough for winter.

J. A. Morton, of Maine, said that 9 of the best counties had 10,000 colonies of bees, but being kept in old-fogy style, 30 per cent died in winter.

Wm. Muth Rasmussen estimated the average crop of honey for California from 25 to 30 lbs. per colony.

Mr. R. S. Musser reported for Missouri, that bee culture was on the increase, but he had no definite figures at his command.

Mrs. L. Harrison said the honey crop of Ill. has been the best for 12 years, and is still continuing.

Dr. J. E. Lay, of Texas, gave a graphic description of bee culture in the Lone Star State. During the season, when horsemint bloomed, his bees would touch nothing else. Horsemint never failed to bloom; winter couldn't kill it, nothing on earth would eat it, and the only use it could be put to was to season sausage and give honey. He began with 15 colonies and increased to 55, and had secured 300 pounds of honey from each of his colonies.

Mr. Harrington, of Ohio, said he had heard so much about Texas that he intended to load his bees on a train, snap his fingers at the Northern blizzard, and winter in the Lone Star State.

After the laughter had subsided, upon motion, Dr. C. C. Miller, of Illinois; Judge Andrews, of Texas, and Mr. Poppleton, of Iowa, were appointed a Committee on Statistics, and the convention adjourned for dinner.

AFTERNOON SESSION—FIRST DAY.

The Convention was called to order at 2 p.m., and after the reception of new members, Mr. O. O. Poppleton's paper on Chaff Hives in Winter was read by the President, the author, though present, suffering from a serious affection of the eyes. [This essay may be found on page 629 of the Bee Journal for Oct. 4.—Ed.]

Mr. Christopher Grimm favors cellar wintering. He prepares his bees early, and they need no care afterward; uses sub-earth ventilation; has hives open full size of entrance, and one-quarter inch at top, full width of hive. Cellars will not get too warm, if too many bees are not put in.

C. C. Miller has most trouble in cellar wintering just before taking them out in spring.

D. A. Jones explains sub-earth ventilation, and says he keeps his pipes clear of cobwebs, etc., by firing a musket in at one end. The pipes are 100 to 150 feet long, and about 6 by 6 inches, for 100 colonies. Would by all means use sub-earth ventilation, as it keeps bees dry.

Prof. Cook strongly advocates cellar wintering and sub-earth ventilation. The exit pipe should be only about half the diameter of the sub-earth pipe.

Mr. Jones advises one square inch for each colony for the ventilating tube in the cellar.

G. G. Large reports 10 lbs. of honey consumed by colonies not packed in chaff, and 4½ lbs., chaff-packed, in out-door wintering.

C. C. Miller has not had the same experience.

Mr. Grimm uses 8-frame hives.

Mr. Jones favors chaff and cellars combined; he has swept out from 1 to 1½ bushels of dead bees from 150 colonies.

Rev. L. Johnson says dark and light Italians are like dark and light men; he does not think that color makes any particular difference.

Mr. Pond, jr., of Foxboro, Mass., being absent, his paper on Advancing the Science of Apiculture was read by the Secretary. [This essay may also be found on page 630.—Ed.]

EVENING SESSION—FIRST DAY.

Secretary Root read a paper on Honey Plants and Their Culture. Dr. J. P. H. Brown, of Augusta, Ga., then read a paper on Honey Plants of Georgia, exhibiting specimens. He was tendered a vote of thanks, and requested by a unanimous vote to put it into suitable shape for publication. Mr. Peden, of Kentucky, at the request of the convention, made a few extemporaneous remarks on the Honey Plants of Kentucky, and was listened to with strict attention. Mr. D. A. Jones, of Ontario, Canada, then read, by request, a paper on Honey Plants of Canada.

MORNING SESSION—SECOND DAY.

Assembled at 9 o'clock. President Cook delivered an address on Experiment with bees, and the Secretary read a paper on Methods of Obtaining Queen Cells for Nuclei, furnished by Mr. Paul L. Viallon, of Louisiana, who was unable to be present. [Prof. Cook's address may be found on page 626 of the Bee Journal for October 4.—Ed.]

Mr. Kleinow, of Michigan, invited the Convention to meet next year in Detroit. Mr. Jones, of Canada, suggested Toronto, offering the additional inducement of a free hall. Dr. Miller suggested Chicago, and was also willing to hire a hall. Mr. Shaw, of Indiana, presented the claims of Indianapolis, with the unanimous request of the State society, who could furnish free the rooms of the State Board of Agriculture. He could do even better than his predecessors, for a lady member would arrange for the free entertainment of the ladies who would attend the convention. It was voted to hold the next annual session in Toronto, Canada.

Dr. J. P. H. Brown, of Georgia, then read a paper on Rearing Queens, which will be published in a future number of the Bee Journal.

The following were elected as the officers for the ensuing year:

President—D. A. Jones, Beeton, Ont.
Secretary—A. I. Root, Medina, O.
Treas.—C. F. Muth, Cincinnati, O.

Vice Presidents:—W. S. Hart, New Smyrna, Florida.
Dr. J. P. H. Brown, Augusta, Ga.
Dr. C. C. Miller, Marengo, Ill.
J. M. Hicks, Battle Ground, Ind.
O. O. Poppleton, Williamstown, Ioa.
P. Scovel, Columbus, Kansas.
Rev. L. Johnson, Walton, Ky.
P. L. Viallon, Bayou Goula, La.
A. G. Mason, Maine.
F. Della Torre, Reistertown, Md.
J. T. Davis, Shelburn Falls, Mass.
Prof. A. J. Cook, Lansing, Mich.
Dr. O. M. Blanton, Greenville, Miss.
E. M. Hayhurst, Kansas City, Mo.
Prof. J. Hasbrouck, N. J.
G. M. Doolittle, Borodino, N. Y.
Dr. H. Bessie, Delaware, O.
J. Vandervort, Lacyville, Pa.
H. Hammond, S. C.
J. T. Wilson, Tenn.
W. H. Andrews, McKinney, Texas.
A. E. Manum, Bristol, Vt.
J. L. Bowers, Va.
C. Grimm, Jefferson, Wis.

AFTERNOON SESSION.

The afternoon was passed by the society at the Exposition, where machines for honey production were exhibited in Power Hall, comb foundation being manufactured and distributed among the spectators.

EVENING SESSION.

In the evening the new officers took their official positions, and Mr. A. I. Root, of Medina, O., read a paper on Courtesy in Journalism, deploring the bitterness of many scientific controversies, and expressing the hope that for the future acrimonious controversies be dispensed with, in bee periodicals. A resolution to that effect was thereupon adopted.

Dr. C. C. Miller then read Mr. G. W. Demaree's paper on Control of Fertilization. [See page 628, for this essay.—Ed.]

Dr. C. C. Miller then read another paper by Mr. Paul L. Viallon on Experiments in Comb Building, which was published on page 627 of the Bee Journal.

MORNING SESSION—THIRD DAY.

The Convention assembled at 9 a.m. and was called to order by President Jones.

A letter was read from Dr. Parmley, of New York, enclosing $50 for the Rev. L. L. Langstroth, and this was increased to over $100, by the persons present.

The evening meeting of the day previous had adjourned in the midst of an interesting discussion on Comb Building, which was resumed and carried on for some time.

President Jones announced that he desired to offer a paper on How to Cure Foul Brood, and that Mr. C. F. Muth desired to read another on the same subject.

The papers were thereupon read, and a spirited discussion on the subject ensued.

Prof. Cook said that salicylic acid was wonderfully potent in preventing fungoid growths, and mentioned the fact that a quart of mucilage will sour in a very short time in summer, but if a pinch of the acid be put in, it will remain unchanged for months. All agree that foul brood is a terrible thing in an apiary, and very much to be dreaded.

Mr. C. Grimm said that is best to burn both the hives and bees, saving only the queens. Nearly all agree that if the queen is unaccompanied by workers she will not communicate the disease. A queen cannot be reared in a colony that is afflicted with foul brood.

Prof. Cook gave some instructions concerning the disease, demonstrating how it may with certainty be invariably recognized.

Both of the papers that have been read suggested remedies, but Mr. J. M. Hicks, of Indiana, stated that, acting on the principle of an ounce of prevention being worth two or three pounds of cure, he had for 13 years set out a dish containing a solution of rock salt and water near his hives for the bees to drink from, and that his apiaries had been entirely free from the disease, while his neighbors suffered severely.

Dr. C. C. Miller, read his address on "Comb vs. Extracted Honey," which may be found on page 631, of the Bee Journal for Oct. 4, and it was then discussed as follows:

C. F. Muth said he could get two or three times as much extracted as comb honey.

J. S. Hill thinks he can get twice as much.

Dr. Miller thinks not very much more.

G. G. Large said he could get three times as much extracted honey as he could of comb honey; and the former pays better at 10 cents per pound than the comb honey does at 20 cents per pound. From 70 colonies he obtained 6,000 pounds of extracted honey and 3,000 pounds of comb honey. Colonies made up from a single comb, in the spring, gave 100 pounds of extracted honey, besides making a full-sized colony.

D. A. Jones strongly favored the extracted honey, and said he could get from three to five times as much as he could of comb honey. He said he could make $5 to $1 over comb honey. It is aggravating to ship comb honey, but extracted honey will ship safely anywhere.

Dr. Miller, in 1881, increased 12 colonies to 81, and obtained 1,200 pounds of comb honey.

Dr. O. M. Blanton said that the value of the comb saved by extracting was worthy of very careful calculation.

D. A. Jones said that sections that were not square should be put on the hives in such a manner as to be the longest up and down; it is still better to reverse them after they are half sealed.

AFTERNOON SESSION.

President Jones described his manner of dipping, in order to obtain the sheets of wax all of one thickness, by using a dipping-board about two feet long and alike at both ends. After dipping once, he dips it again with the other end down, and in this way he obtains a long sheet of even thickness.

Mr. J M. Hicks, Battle Ground, Ind., gave the following address:

It affords me much pleasure, as well as satisfaction to meet with the members of this great Society, now holding its 13th Annual Session. We see a few of those who met with us in our first organized meeting, and yet we see with regret some vacant seats, made so by the hand of death. The old veterans in apiculture, Quinby, Hamlin, Otis, and also more recently the lamented A. F. Moon, all of whom were members of this Society, actively engaged and much interested in the science of apiculture.

Time will not permit me to go into detail concerning all the good and noble traits of character of those who once met and occupied their seats with us and took part in the free discussions of this Society, composed as it was for years of some of the brightest intellects of the North American continent. Here it is that we have a free discussion of all important questions, as well as an interchange of views, thoughts and best plans for the proper management of our little pets, the bees; yet we often find ourselves differing in some of the appliances to be used. But one universal opinion prevails among all practical bee-keepers, that is, all who can expect to succeed, must adopt and use a good movable frame hive—one in which bees can be easily handled, causing as little irritation as possible to the bees.

We shall not discuss the merits or demerits of any particular hive, well knowing this is not the proper place.

We now come to the subject that should interest all who attempt to keep bees for profit—that of honey-gathering and the proper management of bees, for breeding queens of undoubted purity. It is a well known fact, that pasturage has a great deal to do with the success of an apiary. All of these lessons are of vast importance to the bee-keeper who expects to become master of his or her profession, and succeed in this, one of Nature's most beautiful departments of labor.

We have been for many years a student around the bee hive, among the bees, for the purpose of learning all we could of their wonderful workings and yet we find a rich reward for all pains taken in thier behalf, as well as our own knowledge much advanced in the science of apiculture.

Let me now say a few words by way of advice to those who may be thinking of this particular branch of business as a calling or occupation, in future years. I especially address myself to the mere novice. There are many locations yet unoccupied that would well repay all dilligent and industrious workers in this occupation. It is now estimated that we have at present 250,000 bee-keepers engaged in this branch of business in the United States, and yet there is (on Uncle Sam's farm) plenty of room for as many more, yielding millions of revenue, making ourselves more happy and prosperous, and we should have the satisfaction of knowing that we could save many million pounds of honey that is now being lost every year, for the want of more bees to gather the rich stores contained in the bloom of Nature's fields, thereby supplying our tables, as well as many of the tables of our rich cousins, across the briny deep, who are just beginning to realize the fact of the magnitude of this branch of agriculture as now carried on in the United States.

In this, as well as many other countries, bees seem to be stirring up quite a lively interest, causing the people to meet in State and National bee meetings in almost every part of the civilized world, in order to advise, counsel and plan for more successful methods in the management of the honey bee, for the good of man.

Mr. J. S. Terrill, of Ridgeville, O., explained how he obtained the statistics of his County: He mailed letters, each containing a postal card addressed to himself, to every postmaster in the county, and requested him to write on it the names of all the bee-keepers getting their mail at his office, and mail the card back to him. Now, by mailing similar cards to all the bee men, with a printed request and blanks to fill out, he obtained nearly a full report of all the bees in his county, as well as of the honey produced. This list of names he says is worth all it has cost him, and may be used to advantage for calling conventions, or any other purpose for which it may be desired, pertaining to beekeeping.

The committee on exhibits then made its report:

The most important of these exhibits were the honey extractor of Mr. C. F. Muth, and the comb foundation machines of Messrs. Vandervort, A. I. Root, Wm. C. Pelham and C. C. Van Deusen; the honey knives of Messrs. Bingham & Hetherington, and Jones; the smokers of Messrs. A. I. Root, Bingham & Hetherington, Scovell & Anderson; the cages for shipping queens by mail by Messrs. A. I. Root and I. R. Good; the bee tent and observatory hive of Mr. A. I. Root; the straw mat of Mr. C. F. Muth; the beautiful honey labels for packages by Mr. D. A. Jones; the "A B C of Bee-Culture," by A. I. Root; "Manual of the Apiary," by Prof. A. J. Cook; the AMERICAN BEE JOURNAL and *Gleanings in Bee-Culture* were warmly indorsed. The rare and beautiful packages of honey, both in comb and extracted, were as follows: From Florida, Tennessee, Nebraska and Mississippi; C. F. Muth, of Cincinnati; Dr. J. E. Lay, Texas, and Dr. Bessie, of Delaware. O.; the microscopic observations of dry feces, and of pollen, exhibited by Prof. Cook, and plants by Dr. Brown, of Georgia, were especially mentioned. Especial attention was called to the bee tent of Mr. Root, for preventing robbing; the honey sent from Volusia County, Fla., and the displays of Mr. L. Testor, of Nebraska, and Judge Andrews, of Texas.

The committee on statistics submitted the following report from 53 of the members present, a recapitulation of which is as follows:

Total No. of colonies last fall	3,489
Average No. of colonies to each member	66
Colonies lost in winter	66
Colonies lost in spring	144
Colonies beginning the season	3,087
Colonies devoted to other purposes than honey	636
Colonies at present working	4,748
Production—	Pounds.
Total comb honey	47,451
Average for each owner	895
Average for each colony	15½
Total extracted honey	99,808
Average for each owner	1.883
Average for each colony	32½
Total production both kinds	147.259
Average per owner	2,778
Average per colony	48

The Convention then passed resolutions of thanks to the proprietors of the hall for its free use, and to Mr. C. F. Muth, for his great kindness in entertainment. Also to the Railroads, the exhibitors, and to the retiring president, Prof. A. J. Cook, for the faithful discharge of the many duties devolving upon him, during the past year.

The Convention adjourned to meet in Toronto, Canada, next October.

* * *

☞ The Union Bee-Keepers' Association of Maryland, Virginia and West Virginia, will meet at Hagerstown, in the room of the County Commissioners, at the Court House, on Wednesday, Oct. 18, 1882, at 1 o'clock, p. m., the session to last two days. The Washington County Fair will then be in progress, which will give persons an opportunity to attend the exhibition. All persons intending to go will please drop me a card, so that I may secure for them half-fare rates.

J. LUTHER BOWERS, *Sec.*

* * *

☞ The Iowa Central Bee-Keepers' Association will hold its annual meeting at the office of Graham & Steel, Winterset, Iowa, on Friday Nov. 3, 1882, at 10 a. m. All interested in bee culture are invited.

HENRY WALLACE.

* * *

☞ The fall meeting of the Northern Ohio Bee-Keepers' Association will be held in Whittlesey Hall, Norwalk, O., Saturday, Oct. 21, commencing at 9 a. m. A full attendance is solicited, as it will be a meeting of more than usual interest. Principal subject for discussion: "How shall we winter our bees without loss?"

S. F. NEWMAN, *Sec.*

For the American Bee Journal.

The National Convention.

The Association adjourned in the afternoon of the 5th inst. after a pleasant, harmonious and instructive meeting, to meet again in Toronto, Canada, next fall. A larger number of members had collected than I had observed at any previous meeting. Before adjourning, a number of our members concluded to visit the apiary of Mr. J. S. Hill, at Mt. Healthy, about 10 miles from our city. Accordingly a large wagon was procured (a music-band wagon) with 4 gray horses to it, for our journey the next morning. Dr. Brown and wife and Mr. Poppleton and wife (the only ladies in the crowd) took the lead in a carriage. Our reception was one worthy of our friend Hill, his good wife and fair daughters. We went over friend Hill's apiary, every part of which is always in good order, examined his hives, colonies, tools, criticised young queens with their mothers and grandmothers, etc., and no doubt, every one made a note of some item of interest to himself. We next partook of a royal dinner and in the afternoon we bade farewell to our kind host and his interesting family. When we arrived home, we were in the best of spirits and every one appeared to be more than satisfied with the success of the day.

A Langstroth fund was made up of $53.25 and the money duly forwarded to Mr. Langstroth on the same day by the treasurer.

When my essay on "foul brood" was read, Mr. D. A. Jones followed it. A lively discussion ensued. Mr. Jones said that he had cured foul-brood by the starving process, I had tried it but had not succeeded. I had related my method, of late. I discovered the causes of my repeated re-infections, etc.

Mr. Bingham stated that about 20 years ago he had foul brood in his apiary, and that he simply cured it by the starving process; that I had never cured it, my apiary being afflicted now for 10 years, or more, showed it plainly, etc.

Thinking of the subject matter only I was the last one in the room to notice Mr. Bingham's remarks. A friend remarked afterwards that Mr. Bingham's was the only unpleasant language used during the Convention.

Mr. Jones was honest in his assertion, but one of Mr. Bingham's old neighbors stated that he had serious doubts of Mr. Bingham's ever having had the real foul brood in his apiary.

Mr. Jones offered that if Prof. Cook could not cure foul brood by the starving process, following his directions, that he would pay $50.00. I offered to furnish the diseased colony and a wager of $50, that Prof. Cook cannot cure it in that manner; the money to be added to the Langstroth fund. The wager was accepted. The money will be well spent and the public will profit thereby.

C. F. Muth.

Cincinnati, Ohio, Oct. 9, 1882.

☞The Northwestern Bee-Keepers' Convention will meet at Chicago, Ill., on Wednesday and Thursday, Oct. 18 and 19, 1882. The office of the American Bee Journal has been kindly tendered as a place of meeting. A cordial invitation is extended to all bee-keepers, and especially those of the Northwestern States, to be present. The meeting takes place during the last week of the Inter-State Industrial Exposition, to enable all to obtain reduced railroad rates. First session at 10 a. m.

C. C. Miller, *Pres.*
C. C. Coffinberry, *Sec.*

☞The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning County, in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th.

Leonidas Carson, *Pres.*

☞The Southern California District Bee-Keepers' Association will hold their annual Convention in Union Hall, Los Angeles City, Oct. 19, 20, 1882, during the week of the Agricultural Fair. The Convention promises to be of so much interest that no bee-keeper should miss it. Ladies are pressingly invited to attend.

J. E. Pleasants, *Pres.*

SELECTIONS FROM OUR LETTER BOX

A Land Flowing with Honey.—No frosts yet and my bees are now gathering from heartsease that came up in the stubble since harvest. Why don't some enterprising person, from the clay hills, come out here where he can buy land cheap, and sow 160 acres of sweet clover seed and make a fortune with bees and honey?

Joseph Saunders.

Reynolds, Neb., Oct. 3, 1882.

Bees in Kentucky.—I am a beginner in the bee business; started in the spring with 12 colonies, all blacks and mostly in box hives; I increased to 30 fair colonies, by artificial swarming, with the exception of 2 natural swarms and have taken some surplus honey. The season for honey was very poor on account of so much rain. I have bought and introduced 6 Italian and 1 Syrian queens. My bees are mostly in the standard Langstroth hives. Please name the following flowers: No. 1 grows about 4 to 5 feet high has yellow bloom, and is found in old fields; it has been in bloom about 2 weeks and is still blooming; the bees are working on it every warm day. No. 2 grows 2½ to 3 feet tall, has a pink flower and is found mostly in woods and orchards; the bees are working on it all day. Please name quality of honey.

C. T. Biggers.

Minerva, Ky., Oct. 1, 1882.

[No. 1 is one of the family of golden rods. No. 2 is an aster. Both yield excellent honey and plenty of it.—Ed.]

A Large Yield.—This was one of my best honey seasons since I began bee-keeping, which is now 6 years ago. I commenced, this spring, with 15 colonies, in fair condition; increased to 32, and took 1800 lbs. of comb honey and over 200 lbs. of extracted; have used about 25 lbs. of comb foundation which was a great help in getting so large a crop of honey from so few bees. My best colony yielded over 200 lbs. of comb honey counting in the increase, 1 swarm. My comb honey is all in sections. I have sold all but 400 lbs. at 15 to 18 cents per lb.

H. T. Hartman.

Freeport, Ills., Oct. 10, 1882

Few Bee Men There.—If I should say I was surprised, it would not half express my mind. I have more than ever satisfied myself that bee-keeping is in its infancy and that there is still vast tracts of territory unoccupied by bee-men and enough honey evaporated by the atmosphere to supply every family in this broad land of ours with all the honey they could use. In attending 3 fairs—Mendota, Princeton and Wenona—I met less than 10 men interested in bee-keeping, and the fairs were largely attended by all classes. My bees have been on a strike for a week or so. We had a light frost on Sept. 25, that seemed to discourage them, but they have now all gone to work in the sections again. The weather is very fine for this season and should it last so a few days, the bees will finish capping much honey that is now unfinished. The fall has been favorable and bees have done very well.

H. S. Hackman.

Peru, Ills., Oct. 2, 1882.

Another Good Report.—I did not intend sending in my report yet, as we have some honey yet coming, but noticing the good report of Wm. Malone, and your desire for those that have done as well, to "rise and explain," I send in a little report. I commenced the spring with 27 weak colonies of black bees and one good strong colony of Italians. I used but little foundation; have extracted 6,250 lbs. of honey; have a few hundred pounds on the hives yet, and have increased to 75.

Thos. Balcomb.

Luling, Texas, Oct. 5, 1882.

Very Well Paid.—My bees have paid me well this summer for my time and labor. I put 15 colonies into winter quarters, last fall, and took out the same number in the spring. They have given me a surplus of 2,800 lbs. of honey, 1,000 lbs. in sections and 1,800 extracted. My colonies now number 35.

J. O. Todd.

Richmond, Iowa, Oct. 9, 1882.

Food for Shipping Queens.—On the 13th of September (if I am wrong in dates I hope the parties will correct), Mr. I. R. Good, of Nappanee, Ind., sent a cage of bees, rationed with the above food, to Prof. Cook, Lansing, Mich. The Professor remailed them to Mr. Paul L. Viallon, of Bayou Goula, La., with the request to remail them to me, to bring to the Convention at Cincinnati. I left home before they arrived, but my assistant informed me that they were taken from the postoffice on the 26th—13 days after they first started on their tiresome journey. One side of the cage contained a queen and a few workers, alive and in good condition; while the other side contained only workers, which were all dead. Both parts of the cage had still plenty of food; but in the part containing only bees, the entrance to the food was blocked up by dead bees. The above, I consider a severe test of the mixture, and speaks well for it. The desired improvement would seem to be—greater accessibility to the food.

J. P. H. BROWN.
Augusta, Ga., Oct. 10, 1882.

[We received a similar cage of bees from Mr. Good, and sent them to Dr. Howard, of Texas, on Aug. 26. They were received by him all alive (not one bee dead) on Aug. 30, and he returned them to this office, where they were received Sept. 4th, 2 bees only being dead. We sent them back again to Dr. Howard, Sept. 5th, and he received them Sept. 9, when 5 of the bees were still alive, after a confinement and constant travel of 4 weeks. Dr. Howard then filled the cage with food of his own preparation and a fresh lot of bees, and sent them to this office. These came in good order and we sent them to Dr. Brown, Augusta, Ga., and he sent them back to Dr. Howard.

Mr. Henry Alley has also sent some bees with food prepared by himself. These were forwarded to Mr. C. F. Muth, of Cincinnati, O., and they were, by him, sent back to Mr. Alley. They had been queenless for several weeks and we doubt not but that better results would have been obtained had the bees been taken from a colony having a good queen.

My. Alley remarks as follows on the "Good" food, and the manner of using it:

> I do not think the bees starved, but died from long confinement. You probably noticed that I inclosed the "Good" food in paper when the cage was prepared—there were no loose grains in the cage when it came back. If that one trouble can be obviated I shall call the "Good" food, perfect. Perhaps, by putting paper about the food, or inclosing it in something so that the cage will not absorb the honey, the grains of sugar will not rattle off so much. Of course the bees cannot use the sugar, as they have no water to dissolve it. I think bees will soon be excluded from the mails if the "Good" food is used as it has been; complaints will soon be made about so much sugar in the mail bags—those who use a sponge will have to be careful not to get on too much honey, as it will run out and soil the mail. Wooden cages should be coated with hot beeswax and rosin in the cavity, where the food is put.

Bee and Honey Show at St. Joseph, Mo.—We had a good bee and honey show here. There were about 2,000 lbs. of honey, 6 nuclei and 5 colonies of bees. The premiums were many and large, and the interest was more than double that of last year. Thousands of people said it was the best bee and honey show they ever saw. Many traveled hundred of miles to see our display, and went home well pleased with what they had seen. In 1879 I showed one colony of bees, and I with others had about 25 lbs. of honey—so we think we have done well, but we will try to do still better next year. May the BEE JOURNAL live till glucose and dollar queens shall be numbered with the past; then may the JOURNAL and its editor still live to bless our bees and us.

D. G. PARKER.
St. Joseph, Mo., Oct. 14, 1282.

An Excellent Report.—Commenced the season with two colonies; increased to 5, and have obtained 200 one pound boxes of honey. I took 65 from one colony. The fore part of the season was very poor; the honey is of prime quality.

B. W. PECK.
Richmond Center, O., Oct. 12, 1882.

Almost a Failure.—Honey is almost a total failure here this year. I did not get surplus enough to pay expenses. Have 50 colonies in good condition for winter.

W. H. FRANCIS.
Frankfort, Mich., Oct. 11, 1882.

Yellow Variety of Sweet Clover.—I had an acre of sweet clover in bloom, the past season, among which were a few stalks of the yellow variety. I watched curiously to see if the bees made any distinction. To all appearances they worked upon the yellow with the same satisfaction as upon the white. There seem to be two varieties of the white, one with a pure white blossom and light green stem; the other a pale pink blossom and dark green stem. As I sowed imported and native seed mixed, I surmise it might have occurred in that way.

D. P. NORTON.
Council Grove, Kan., Sept. 30, 1882.

Botanical.—Bees were working last week on the inclosed flowers. What are they? They were picked near Qu' Appelle, North Western Territory. I hear bees do well in Manitoba.

R. F. HOLTERMAN.
Fisherville, Ont., Sept. 28. 1882.

[They are asters, and yield excellent honey.—ED.]

Wonderful Success.—I would like to make a statement through your columns of what I have done this year with the investment of $1.50. Seeing there was considerable interest manifested throughout the country in scientific bee-keeping, with 2 flourishing apiaries in our little town, I thought I would invest in a colony of bees as I could purchase them for $1.50. I wanted to see if there was not much humbug in this "profitable" modern bee-keeping, but I think by this time I am fully convinced, that scientific bee-keeping must be one of, if not the most profitable business in existence, for I have to-day 8 colonies of bees worth (without hives) $40. and have sold $40. worth of honey. What business or occupation can compare with that? A profit of $78.50 on the investment of 1.50. My success is due to Mr. Thos. Balcomb, of the Lone Star Apiary, who kindly offered to "work" my bees to prove that bee-keeping was profitable. Mr. Balcomb and others have assured me that this has been an exceptionally good honey season, but notwithstanding all that I am convinced that scientific bee-keeping is one of the most remunerative occupations of the age.

THOMAS WILSON.
Luling, Texas, Oct. 11, 1882.

No Surplus Honey.—I had 6 colonies in the spring, which I have increased to 12; the honey flow all through the summer was small, and the hives were almost without stores, but the fall crop is filling the hives rapidly. I have had no honey yet, but will have all that is needed for winter. My bees are all in the Langstroth hive.

A. E. FOSTER.
Covington, Ky., Oct. 2, 1882.

Well Done.—My honey crop of 1882 is 5,000 lbs.—2,000 lbs. of comb honey and 3,000 lbs. of extracted. I commenced in the spring with 57 colonies; increased to 85 and I think that I have done well this year. I find the BEE JOURNAL a great help to me.

JAMES CORBIT.
Palmyra, Mo., Oct.10, 1883.

Sections, Frames, etc.—I increased from 9 to 42 colonies, by natural swarming. Swarms in August were larger and built up better than in June. I never before had drones fly as late as Oct. 10th. A part of my bees are the Cyprians, crossed with Italians; they are best for docility, and prolificness, but the Italians are best for honey. Please answer the following: 1. What is the difference between prize boxes and sections? 2. Is a frame as good without a bottom bar as with it? I got some from Mr. Salisbury of that kind.

D. S. KALLEY.
Mansfield, Ind., Oct. 13, 1882.

[A prize box, holds 2 lbs. of honey, and must be nailed; sections are usually known as those that are dovetailed, or made all in one piece.

2. No; they are not as strong, and therefore we should not approve of them.—ED.]

Lady Bee-Keepers.—A few weeks ago I gave a brief account of Mrs. Ellen Gray's success as a bee-keeper. Her report for the season is 40 good colonies in Langstroth hives, from 20 colonies spring count, and 1,450 lbs. of nice comb honey. I think this pretty good for the first effort. Mrs. Esther Wirt, whose subscription I send to the WEEKLY BEE JOURNAL to-day, and whose bees I have kept for two seasons past, is going to fit herself to care for her own apiary in the future, and makes the very sensible move of ordering the BEE JOURNAL as the first step essential to success. All bee-keepers can extend to Mrs. Wirt a cordial welcome, for she is one of those women who possess clear heads, kind hearts and willing hands.

J. R. BAKER.

Keithsburg, Ill., Oct. 19, 1882.

An Extraordinary Season.—The past season has been an extraordinary one in more respects than one. The spring was so cold and wet that I had to feed my bees to keep them from starving, until white clover bloom. Since that, there has been one continous flow of honey, not a large heavy flow, as is sometimes the case, but a steady moderate flow, without a gap, ever since white clover bloomed. My bees are, to day, working on white clover which sprang up in the pasture fields. Throughout the season there was no trouble from robber bees; this is the first time I ever saw it so since I have been keeping bees. Buckwheat and goldenrod yielded well in their season, and now wild aster and other fall flowers are keeping the bees busy. I send two sprigs of flowers for a name. The bees cover them all day. No. 1 seems to be better liked by the bees than No. 2. What are they? I have not done so well this season as I might as I farm 100 acres all alone, and, as a matter of course, bees must take the back seat. I commenced the season with 10 colonies, 2 Italians the rest blacks; lost 2 in May and June by abnormal swarming, increased by artificial swarming to 18, all in good condition for winter, all having young Italian queens, except 3. I have but one black queen and I will get rid of her another season. I ran three colonies for honey; obtained 100 lbs. of comb honey and about 50 lbs. of extracted. I can sell more than I can raise at 20c. for comb and 16c. for extracted, and cannot begin to supply the demand. This is the first time that honey has ever been produced in one pound sections in this vicinity. I have done some introducing this season, using the cage described on page 390 of BEE JOURNAL, 1879, and I have not had a failure with it. My method is to remove the queen to be superseded, and immediately cage the new queen on a comb; close the hive and not disturb it for at least three days, at which time I have always found the queen liberated and laying. But it would not do to leave the old queen in the hive, for the bees have, every time that I have tried it, liberated the new queen within three days and sometimes at the end of 24 hours. My experience will not agree with your remarks about the cage on page 390 of AMERICAN BEE JOURNAL for 1879, I will say that I have just introduced 14 queens in all with the above described method and cage. There are a good many bees kept here in the old style, and there has been but few swarms. I did not have one natural swarm, and tried no prevention.

J. H. EBY.

North Robinson, O., Oct. 2, 1882.

[Both specimens belong to the aster family, which is a very numerous one. All yield honey of a good quality.—ED.]

Heavy Day's Work.—Reports of big days' work seem to be in order. On Aug. 22d, my wife and I took 1,648 lbs. of honey in one-pound sections. We took it from the heaviest colonies in order to make a brag day's work. One-third the amount did well enough for an ordinary day's work. As I had 174 colonies on May 1st, and now have 202, I sign myself

C. C. MILLER, 174–202.

Marengo, Ill., Oct. 11, 1882.

Doolittle's Opinion of the Monthly Bee Journal.—I have received a sample copy of the Monthly BEE JOURNAL, as it will be published in 1883, and I must say that it will fill a place in bee literature much needed by many who do not feel able to pay for or peruse the Weekly. Of course, there is nothing like the Weekly for me, but all do not feel as I do about it, and this Monthly "just fills the bill" for all who do not desire a Weekly BEE JOURNAL.

G. M. DOOLITTLE.

Borodino, N. Y.

Well Pleased.—In the early part of the season, bees were doing well. The willow and maple trees bloomed early, and the weather was fine for a few days; but in the latter part of April and May it became very cool, and caused some delay in honey gathering. Although I failed to get any surplus honey this season, I am well pleased with my increase. I began with 6 colonies, spring count, and now have 14 colonies good and strong.

ERNST ZABEL.

Maxon, Kan., Oct. 9, 1882.

Honey Season in the Southern States.—As soon as the swarming season is over, is the proper time for going around the apiary to requeen, supersede old queens, and unite any weak colonies. If the bees are populous they will gather their winter stores from fall flowers, and a surplus in November. If the bees are strong and have honey, they winter first rate on the summer stands. In an early spring, breeding begins in January and February. Sometimes they gather honey enough in February and March for brood rearing, but our general honey crop begins in April, and our bees must be strong for the harvest when it comes. Bees have swarmed extraordinarily this season. The parent colonies are depopulated; late swarms have not honey enough and will starve unless fed. Then the moth will come, and have all the blame. Bees are gathering honey from goldenrod and other flowers. The honey crop this year is large, but there is no sale, except in nice box and sections. The rules given by Northern bee men for having our bees strong for the honey crop, will not apply for this latitude.

FRANK THIAVILLE.

Forest City, Ark., Oct. 20, 1882.

No Fall Honey Yet.—I have no fall honey yet. My bees have been idle since August 1st. I began with 24 colonies, spring count, and now have 53. I have taken from my bees this season, 1,000 lbs. of honey, of which 825 lbs. is extracted, and 175 lbs. comb. My bees are Cyprians and Italians; I shall winter them on the summer stands, protected from North and Northwest winds, and with plenty of lower ventilation.

JOHN FERSTEL.

Inglefield, Ind., Oct. 2, 1882.

Sweet Clover, etc.—DEAR EDITOR: I have read your instructive article on "sweet clover" in the BEE JOURNAL of the 6th inst., and as it is unknown here and not mentioned in any of our seedsmen's catalogues, I will take it as a great favor if you will send me a small packet of seed to experiment with in our climate. I am charmed with your JOURNAL, but rather at sea with some of your systems to which allusion only is made. For instance, what is the plan followed to make frames "reversible" so that they can be used upside down? Any improvements interest us most, and a particular description is what we want. Bee-keeping is becoming the "craze" in England, every other kind of husbandry being played out, thanks to our enterprising, and more fortunately situated "cousins over the water."

E. H. BELLAIRS.

Christchurch, England, Sept. 24, 1882

[We have sent a package of sweet clover seed to our correspondent, as requested. Reversible frames have no projections to hang them in the hive, and the side bars are ¾ of an inch longer than the frame is deep, projeecting ⅜ at top and bottom, serving as legs and can easily be reversed. These have been described many times in the BEE JOURNAL, as have all the supposed or real improvements, as fast as they are invented. Our correspondent has been a reader of the JOURNAL only for this year, and is therefore not posted in American inventions. Some of the American bee books would be interesting and instructive to him.—ED.]

4,680 lbs. of Surplus from 23 Colonies.—I commenced the season with 23 colonies; have increase to 48; I have taken 1,340 lbs. of comb and 3,340 lbs. extracted honey. I fed my bees as late as June 5th; they are in good condition now for wintering.

G. W. KEELER.

Marshalltown, Iowa, Oct. 2, 1882.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eigh words;** fourteen lines will occupy 1 inch of space Transient Advertisements payable in advance.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisemen published WEEKLY as follows, if the whole paid in advance :

For **4**	weeks		**10**	per cent. discoun
" **8**	"		**20**	" "
" **13**	"	(3 months)	**30**	" "
" **26**	"	(6 months)	**40**	" "
" **39**	"	(9 months)	**50**	" "
" **52**	"	(1 year)	**60**	" "

Discount, for **1** year, in the MONTHLY alone **25** per cent., **6** months, **10** per cent., **3** month **5** per cent., if wholly paid in advance.

Discount, for **1** year, in the SEMI-MONTHLY alone, **40** per cent., **6** months, **20** per cent., **3** months, **10** per cent., if wholly paid in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate fo the time the advertisement *is* inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ The Amerian Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club :

For a Club of **2,**—"Bees and Honey," in paper.
" " **3,**—an Emerson Binder, or "Bees and Honey," in cloth.
" " **4,**—Apiary Register for 50 Colonies, or Cook's Manual, paper.
" " **5,**—Cook's Manual, in cloth, or the Apiary Register for 100 Colonies
" " **6,**—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Two subscribers for the Monthly will count the same as one for the Weekly, when getting up clubs for the above premiums.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly is now permanently established, and will be continued as heretofore.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

◆

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

☞ New subscribers for the Weekly BEE JOURNAL for 1883, can obtain all the rest of the numbers for this year by sending $2 to this office.

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 60
Bee-Keepers' Exch'nge (Houk & Pect)	3 00..	2 80
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 6 above-named papers	6 00..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

The Monthly **Bee Journal** and any of the above, $1 less than the figures in the last column.

◆

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ Hundreds of clergymen, doctors and others have used Kendall's Spavin Cure with the best success.
37w4.

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., October 16, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 6½c. for dark and 9c. for light extracted.
BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 16@20c. on arrival; extracted, 7@10c. BEESWAX—Firm at 20@25c. per lb.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand is good for choice white comb honey in 1 and 2 lb. sections, and prices are without material change, 18@20c. being the range of this week's sales. White extracted, in cans, 10@11c., in kegs and casks, 10c.; dark, 9@9½c. Dark comb honey, 12½@16.
BEESWAX—Yellow, 26c.; dark, 18@22c.

R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—The market is firm for choice qualities but the trade is not active.
We quote white comb, 18@20c.; dark to good, 12@15c. Extracted, choice to extra white, 8½@9½c.; dark and candied, 7½@8c. BEESWAX—30@32c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Plentiful and dull. Comb lower, at 15@18c—latter for choice white clover in small packages; strained in round lots at 6@7c.; extracted in cans at 9@10c.
BEESWAX—Sold fairly at 26c. for prime.

R. C. GREER & Co., 117 N. Main Street.

NEW YORK.

HONEY—Demand slow. We quote: Comb in the small sections, white, 16@20c. Extracted, 7@10c.
BEESWAX—The stock continues light, and prime Southern held up to 30c., with little if any obtainable below 29c. Western, pure, 29@30c; Southern, pure, 30@33c.

D. W. QUINRY, 105 Park Place.

BOSTON.

HONEY—Sells very readily in 1 lb. sections at 22@25c. for best white, and 20@22c. for 1½ to 2 lb. Boxes containing ½ pound, 30 c. per pound. Extracted is selling very slowly at 12@14c.
BEESWAX—25@26c.

CROCKER & BLAKE, 57 Chatham Street.

CLEVELAND.

HONEY—For the past week prices have been a little slow, still 1 pound sections of best white, in attractive shape, sell daily at 21@22c.; 2 pound sections are not much sought after, but are held at 19@20c. Extracted very dull at 11@14c.
BEESWAX—Prime quality, 25@28c.

A. C. KENDEL, 115 Ontario Street.

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey. A new pamphlet of 32 pages. At the last meeting of the North American Bee-Keepers' Society, we were appointed on a committee to prepare instructions on the Exhibition of Bees and Honey at Fairs; this is also added to the above. Price, 10 cents.

◆

Kendall's Spavin Cure is used from the Atlantic to the Pacific coast.
40w4t

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

EXTRACTED AND COMB HONEY WANTED—for which I will pay the highest **Market price.** Correspondence solicited.

W. G. WATKINS,
41w4tp 172 22nd Street, **CHICAGO, ILL.**

NOTICE.

As I do not sell honey on commission, and buy only such kinds as I need in my line of trade, I cannot accept any shipments without previous correspondence.

I can sell Beeswax of any quality, and will pay the regular market price for it, in any quantity, or exchange for it comb foundation, without previous correspondence.

ALFRED H. NEWMAN,
40wtf 923 West Madison Street, Chicago, Ill.

GERMAN CARP,

For stocking ponds, Goldfish, Silver Pearl, Fringe Tails, Golden Orfes, etc. For particulars, address

MUTH & ECKARDT,
37w8t Mt. Healthy, Hamilton Co., O.

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

THIS PAPER may be found on file at Geo. P. Rowell & Co.'s Newspaper Advertising Bureau (10 Spruce St.), where advertising contracts may be made for it in **NEW YORK.**

HEADQUARTERS FOR THE

Golden Italians & Original Albinos,

BEES AND QUEENS.

Send for Circular. **J. M. C. TAYLOR,**
10smtf Lewistown, Frederick Co., Md.

Fruit Evaporators,

To be used on a common cooking stove, capacity 3 to 5 bushels per day. Price, complete, $10; in the flat, partly put together, for $6. A few agents wanted. For particulars and prices for Evaporators, Queen Bees, etc., address

JOHN H. MARTIN,
9smly Hartford, Wash. Co., N. Y.

PLYMOUTH ROCKS EXCLUSIVELY

VERY FINE EXHIBITION BIRDS, and
Trios Mated for Breeding;
Also, SINGLE BIRDS.

Prices reasonable. Correspondence cheerfully answered. **WM. H. BUSSEY,**
38smtf 131 Lake St., CHICAGO, ILL.

ALFRED H. NEWMAN,

Dealer in all kinds of

APIARIAN SUPPLIES,

AND

HONEY AND BEESWAX,

923 West Madison Street,
CHICAGO, ILL.

MY ILLUSTRATED CATALOGUE
sent FREE upon application.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

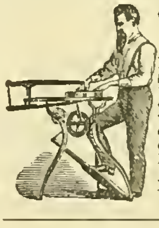
The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited and published by

C. N. ABBOTT, Bee-Master,
School of Apiculture, Fairlawn, Southall, London.

☞ We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 per annum.

BARNES' PATENT

Foot Power Machinery



CIRCULAR AND
SCROLL SAWS,

Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

W. F. & JOHN BARNES,
No. 2017 Main street,
Rockford, Winnebago Co., Ill

Florida Land--640 Acres

☞ CHEAP FOR CASH. ☜

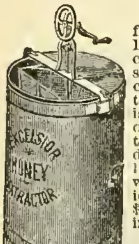
DESCRIPTION,—Sec. 4, township 7, south range 7 west, Franklin county, Florida, situated about 50 miles south of the Georgia line, 25 miles west of the city of Tallahassee, the capital of the State, and about 25 miles northeast of the city of Apalachicola, a seaport on the Gulf of Mexico, and within 2 sections (5 and 6) of the Apalachicola river; the soil is a rich, sandy loam, covered with timber.

It was conveyed on Dec. 31st, 1875, by Col. Alexander McDonald, who owned 6 sections, including the above, to J. M. Murphy, for $3,200, and on Sept. 5th, 1877, by him conveyed to the undersigned for $3,000. The title is perfect, and it is unincumbered, as shown by an abstract from the Records of the county, duly attested by the County Clerk; the taxes are all paid and the receipts are in my possession.

I will sell the above at a bargain for cash, or trade for a small farm, or other desirable property. An offer for it is respectfully solicited. Address,

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

EXCELSIOR
HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13	inches	........$8 00
For 2 Langstroth "	10x18	"	.... 8 00
For 3 " "	10x18	"	........10 00
For 4 " "	10x18	"	........14 00
For 2 frames of any size,	13x20	"	........12 00
For 3 " "	12½x20	"	........12 00
For 4 " "	13x20	"	........16 00

ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen	....................$4.50
2-frame Nucleus, with Tested Queen	.... 5.00
Full Colony, with Tested Queen, before July 1	......12.00
Same, after July 1	...........10.00
Tested Queen, before July 1,	3.00
" " after July 1..	2.50
" " per half doz., after July 1	................13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,
1wtf Burlington, Iowa.

EVERY FARMER AND MILLER

SHOULD have FISHER'S GRAIN TABLES, 192 pages, pocket form; full of useful tables for casting up grain, produce, hay; cost of pork, interest; wages tables, wood measurer, ready reckoner, plowing tables and more miscellaneous matter and useful tables for farmers and others than any similar book ever published. Ask your bookseller for it. Sent post-paid for 40 cents. Agents can make money selling this book.

☞ For sale at the BEE JOURNAL Office. ☜

HONEY

For the past few years I have made this excellent food my leading article. Having the best established reputation in this city as a dealer in PURE HONEY direct from the Apiaries, enables me to obtain the highest market prices. Your consignments and correspondence respectfully solicited.

R. A. BURNETT, Commission Merchant,
Successor to Conner, Burnett & Co.,
28w13t 161 So. Water Street, Chicago, Ill.

LOOK HERE!

If you want cheap bees and hives to suit, good Cyprian, Albino or Italian Queens, Comb Foundation, all kinds, Section Boxes, and everything a live apiarist needs, send for prices.

Full Colonies and Nuclei a Specialty

with good young Queens Give me a call, friends, and I will try and please you. (Box 819)

E. T. FLANAGAN, Rose Hill Apiary,
5wly Belleville, St. Clair County, Ill.

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

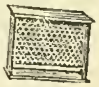
1wly **D. S. GIVEN & C.,** Hoopeston, Ill.

AT LULING, TEXAS.

I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.

14w39t **J. S. TADLOCK.**

FLAT-BOTTOM
COMB FOUNDATION,



high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **25c.** per pound, delivered here, Cash on arrival. Shipments solicted.

To avoid mistakes, the name of the shipper should always be on each package.

ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

—"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tnscoln, Ill.** 1wly.

HALBERT E. PAINE, STORY B. LADD.
late Com'r of Patents.

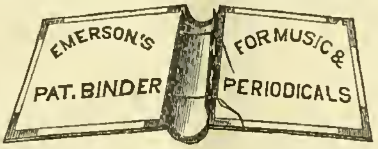
PAINE & LADD,

Solicitors of Patents and Atty's in Patent Cases,
29w13t **WASHINGTON, D. C.**

BIND YOUR JOURNALS

AND KEEP THEM

NEAT AND CLEAN.



The Emerson Binder

IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Monthly Bee Journal	..............**50c.**
For Weekly Bee Journal	...............**75c.**

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicngo, Ill.**

THE AMERICAN POULTRY JOURNAL

Is a 32-page, beautifully Illustrated Monthly Magazin devoted to

POULTRY, PIGEONS AND PET STOCK

It has the largest corps of practical breeders as editor of any journal of its class in Americ , and is

THE FINEST POULTRY JOURNAL IN THE WORLD.

Volume 12 begins January 1881. SUBSCRIPTION:- $1.00 per year. Specimen Copy, 10 cents.

C. J. WARD, Editor and Proprietor.
182 CLARK ST., - CHICAGO

A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN,
Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents;** in paper covers, **50 cents,** postpaid.

925 W. Madison Street, Chicngo, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Teon.

Carefully prepared, and of vast importance to bee-raisers.—Indiaoian, Clinton, Iod.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment.—Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm, Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleoo, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

FOUNDATION

WHOLESALE AND RETAIL.

Dealers in bee-supplies will do well to send for our wholesale prices of Foundation. We now have the most extensive manufactory of foundation in the country. We send to all parts of the United States. We make

ALL STANDARD STYLES,

and our wax is nowhere to be equalled for cleanliness, purity and beauty. Extra thin and bright for sections. All shapes and sizes.

Samples free on request.

CHAS. DADANT & SON,
1wly Hamilton, Hancock Co. Ill.

We now quote an

Advance of 5 Cents per pound

on the PRICES PRINTED IN OUR CIRCULARS, wholesale or retail. 15wtf

INQUIRIES

CONCERNING

THE CLIMATE,

Mines, Manufactories and Commerce

OF

COLORADO,

will be promptly and truthfully answered by private letter, upon sending One Dollar to the

Woman's Industrial Association,
15w6mp 291 Sixteenth St., **DENVER, COL.**

Advance in Foundation.

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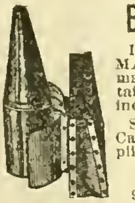

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—:o:—

Read the following opinions of the Book:

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Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

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To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

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It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Bulletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound, and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowledge of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

—:o:—

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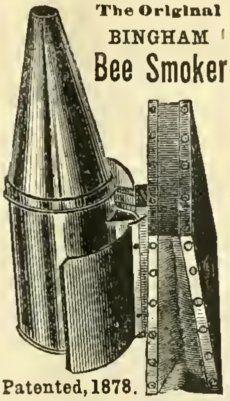

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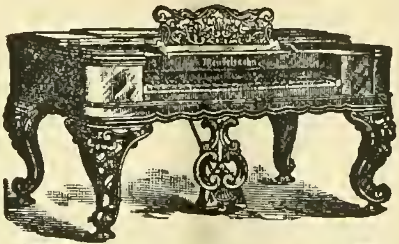

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Bienen Kultur, by Thomas G. Newman, in the GERMAN language. Price, in paper covers, 40 cents, or $3 per dozen, postpaid.

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Vol. XVIII. Chicago, Ill., October 25, 1882. No. 43.

THE AMERICAN BEE JOURNAL

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.. 673
Northwestern Bee-keepers' Convention.. 673
Cosmopolitan Convention........................ 673
New Foreign Honey Plants...................... 674

Among Our Exchanges—

A Standard Frame.................................. 674
The Eternal Fitness of Things................ 674
Beet Honey Show in Scotland................ 674

Convention Notes—

Northwestern Bee-keepers' Society....... 675
    The Syrian Bees................................ 675
    Pasturage for Bees........................... 676
    Fuel for Smokers 677
    Prevention of Swarming..................... 677
    Feeding Bees................................... 678
    Comb vs. Extracted Honey................. 678
    How to Get the Bees off the Sections.. 678
    The Use of Separators...................... 679
    The Use of Comb Foundation............ 679
    Wintering Bees................................ 678
    Statistical Table.............................. 681
Lebanon, Ind., Convention...................... 680
Saunders County, Neb., Convention....... 680
Local Convention Directory.................... 680

Correspondence—

Bees and Honey Thieves........................ 682
How to Winter Bees.............................. 682
Beet Honey Show at Baltimore, Md....... 683
Irritating Effect of Bee Stings............... 683

Selections from Our Letter Box—

Building up Colonies.......... 684
Packing Bees in Chaff........................... 684
Wants a Society.................................. 684
Caution about Shipping Honey......... ... 684

Business Notices—

MONTHLY BEE JOURNAL FOR 1883........ 685
Premiums 684
Clubbing List....................................... 680
Honey as Food and Medicine 685
Honey and Beeswax Market 685
The Apiary Register.............. 685

The Northwestern Convention.

We give a full report of the proceedings of the "Northwestern Bee-Keepers' Association," in this week's issue, and we think it will be read with more than ordinary interest. There were no essays read; and it was solid discussion, from first to last; and the members were so much engaged that they could hardly wait long enough to eat, drink or sleep—so intent were they upon the sessions, of which five were held. The morning session of Thursday was appointed at 8 o'clock, and long before even that early hour, the members, like bees, were buzzing about the hall, and the office of the BEE JOURNAL, busily extracting IDEAS from one another, instead of honey from the flowers.

There were about 125 bee-keepers present, and this year the membership of the Society was double that of the last. The discussions took a wide range, and it will, we think, repay every one to read them carefully. A statistical table was also made of 50 apiaries, which may be found on page 681 of this issue.

As Chicago is a central point for a Convention for those within a radius of 200 miles, or more, the building up of a large society, of great influence and benefit, to the bee-keepers of the great Northwest, is only a matter of time. This Convention will increase and grow, year by year, and will no doubt, become the largest and most influential on the American Continent. Seven States were represented at its last session. This was very encouraging, and demonstrated the fact that the Convention was destined to occupy as a field, the whole Northwest, and be a valuable educator of the people, on the production and sale of pure honey, and scientific bee-culture.

Cosmopolitan Convention.

Mr. Paul L. Viallon, Bayou Goula, La., writes to the BEE JOURNAL, thus: "Don't you think that the name Cosmopolitan Bee-Keepers' Society would be more appropriate when the National Bee-Keepers' Association exceeds the borders of the United States to hold its meeting and select its principal officer? Well, who knows? its next meeting may be in England or Germany." Our correspondent is informed that the correct name is "North American Bee-Keepers' Society," and in selecting Canada for its place of meeting and a Canadian for President, it has not exceeded its original design, name or authority. We hope its next meeting will be one of the best and most interesting Conventions ever held. If enthusiasm will make it so, then it will be, for its President and his countrymen are among the most enthusiastic bee-keepers in the world.

☞ Honest discussion of every theory in bee-keeping is to be desired and courted, but such discussion should never descend to unkind personal remarks. We admire the sentiment expressed in the following from one of our exchanges: "Discussion has for its true object to elicit truth. When this is the object sought after, it is profitable to hear both sides of the argument. But when the argument becomes interlarded with low personalities, honorable men withdraw from it and leave the field to the hero of the hour. He stands alone in his glory."

New Foreign Honey Plants.

Dr. G. L. Tinker, New Philadelphia, O., writes as follows:

> Dear Editor—I send you some specimens of the new foreign honey plants I am cultivating, the seed of which were sent to me by Mr. J. S. Wood, of Denmark.
>
> The leaves and stems with buds and flowers, enclosed in red paper is the *Scrophularia Chrysantha.*
>
> The stem and leaves wrapped in brown paper is the *Scrophularia lateriflora.*
>
> The leaves and flowers enclosed in white paper is the *Scrophularia lanciniata.*
>
> The large hairy pubescent leaves with long leaf stalks is the *Scrophularia vermalis.* The plants from which these were taken now measure 3 feet across and 15 inches high. The whole being a dense circular mass of leaves.
>
> The plant with leaves like sage or mullen is the *Strachyo Lanata.*
>
> The other plant, with leaves in a whorl, is the *Arabis Alpina.*
>
> All are perennial plants that will bloom another year when their merits can be better determined. The *S. Chrysantha,* I stated in the Journal, would cease blooming the middle of August. But about this time new shoots came out so that there has been no interruption whatever to its wonderful blooming qualities. It has had right along from 200 to 400 flowers upon each plant from the time soon after it began to bloom (July 1) until the present. And now you can see that it would bloom all winter if it had a chance. Upon one plant on Aug. 11, I counted 19 bees at work at one time. If this plant can be successfully cultivated, it is full of bright promise to bee-keepers.

Dr. Tinker deserves the thanks of bee-keepers everywhere, for endeavoring to develop and obtain from abroad the best honey-producing plants.

Bee pasturage is the key to the situation. When we have provided the bees with continual bloom to gather honey from, we may expect, and obtain, a continual flow of honey. Until then we have no cause to complain if we obtain but a moiety of that crop which Nature would provide, did we supplement her efforts by providing pasturage for our bees.

Mr. J. S. Wood, of Denmark, is one of the most progressive and enterprising bee-keepers of that country, and also should have our united thanks for his exertions in developing the honey resources of the world.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

A Standard Frame.—The Indiana *Farmer* gives the following on the subject of the general adoption of a standard frame:

> While in attendance at the State fair, we made it a point to inquire of our many bee-keeping friends and visitors their opinions as to the different sizes and styles of frames, and what was likelyto become the standard frame for bee-keepers in America. With but very few exceptions the decisions were in favor of the Langstroth, size 9⅛x17⅝. Some were inclined to the belief that a deeper frame was better to winter in for careless bee-keepers who never made any pretentions to preparing their bees for winter. One gentleman from near Bloomington, Ill., said "he worked about 75 colonies, in two apiaries, had tried both styles of frames extensively and was decidedly in favor of the Langstroth frame, and proposed to change all his remaining colonies to that style of frame in the spring," for, said he, "I work my bees exclusively for honey. I have watched the matter closely and am satisfied that the broad space directly over the brood is the place to secure the most surplus." And, said he, "honey brings money; it is a matter, with me, of dollars and cents, I do not keep bees for the fun of the thing, and if I can only raise them simply to see them 'come through the winter all right,' I do not care to bother with them. I do not raise bees to sell, I am no dealer in bee-keepers' supplies, neither have I any government bonds to clip. I must work for my living and if I cannot make the bees pay, I must give them up for something else. But I am candid to say, on an average of seven years my bees have paid me well, as well as anything else on the place, and I have quite a large farm, and rely on mixed farming, altogether."

◆

The Eternal Fitness of Things.—An exchange gives the following eccentric item concerning the inauguration of a new glucose factory in Canada. It is very suggestive:

> The promoters of a new glucose factory in Toronto conceived the odd notion of inaugurating it by a champagne luncheon served on the top of the chimney, a hundred and sixty feet high. When the champagne rose 5 or 6 feet higher, the cranial cavities that held it would hardly be a choice risk for a life insurance company. However, the precaution of a railing had been provided, and, as the relations of glucose to the wines of France made in Canadian cellars are well recognized, the ceremony was not altogether foreign to the fitness of things.

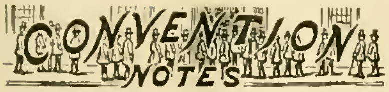
Bee and Honey Show in Scotland.—The following is from the London *Journal of Horticulture:*

> The East of Scotland Bee-keepers' Society held its annual exhibition at Dundee on August 31st and two following days. Notwithstanding the unfavorable nature of the season, the display was unusually full and of splendid quality. Many of the leading bee-keepers in the lowland districts were unable to stage a single exhibit, but those from the interior and highland districts came forward in force with large and well finished lots. Altogether, about 2,000 lbs. of honey were staged, and every class was well competed in. The most striking exhibits were those in the classes for the most artistic displays over and under 100 lbs. Mr. Raitt was first in both classes, and his exhibits were justly admired for their excellent finish and tasteful arrangement. Part of the same lots took two first prizes at the great Preston Show in the following week, and there elicited many comments highly flattering to Scottish bee-keepers. Altogether, there were seven entries in the display classes, and in all the quality of the honey was very fair. The poor taste shown in the arrangement of some entries where shelves and stages were relied on, received a check in the awards of the judges in favor of those exhibiting less carpentry work, but more variety in the size, form and decoration of the sections and glasses of extracted honey.
>
> In the classes for living bees the exhibition was unusually full, no less than ten observatory hives being staged, containing bees of four different races—blacks, Italians, Cyprians, and Syrians. Besides these, there were five neat nests of humble bees and one enormous "byke" of wasps. Several of the observatory hives presented novel features in the direction of an attempt to keep the combs in their natural position side by side, while rendering them capable of individual inspection. The one exhibited by the Secretary, Mr. Warden, accomplishes this by having the hive double the usual height, and so arranged that the padded quilt could be raised to the top, and any separate frame thereafter lifted to a position open for inspection.

◆

Unkind Personalities.—The use of unkind personalities in argument is always an evidence of weakness on the part of the one who uses them. An exchange remarks:

> When a controversy is ended, and the arguments on both sides are exhausted, you will sometimes see one of the contestants take his stand at a safe distance and call ugly names. He imagines himself a hero, has a bellowing voice, and can excel all others in the noise he continues to keep up after they are silent. He is at a safe distance from the scene of strife and can at any time make safe his retreat. Besides, if challenged, he can explain his personalities to mean anything in general and nothing in particular.



Northwestern Bee-Keepers' Society.

The Northwestern Bee-keepers' Society met at Owsley's Hall, Chicago, Ill., on Wednesday, Oct. 18, at 10 a. m., Pres. C. C. Miller in the chair.

The Secretary being absent, T. G. Newman was elected Secretary, *pro tem.*

The minutes of the last meeting were read and approved.

The Treasurer reported a balance in the treasury of $16.50; there being no expense incurred last year for a place to meet in, nor badges.

The President remarked that it was desirable to make a tabulated statement, showing the number of colonies kept by each member of the convention, the results of wintering and the crop of honey obtained, and appointed Mr. I. R. Good to obtain the information and get up the statistical table.

It was agreed that the election of officers be the first business of the afternoon session.

The following members paid their annual dues, seven states being represented:

James Heddon, Dowagiac, Mich.
Dr. S. M. Slade, Elgin, Ill.
I. R. Good, Nappanee, Ind.
T. S. Bull, Valparaiso, Ind.
S. Goodrich, Urbana, Ill.
John A. Williamson, Lodge, Ill.
O. O. Poppleton, Williamstown, Iowa.
J. E. Hunter, Wyoming, Iowa.
M. L. Trester, Lincoln, Neb.
Dr. C. C. Miller, Marengo, Ill.
Thos. G. Newman, Chicago, Ill.
John Hoover, New Boston, Ill.
Nat. Resser, Geneseo, Ill.
Adam B. Miller, Wakarusa, Ind.
Rev. D. Whitmer, South Bend, Ind.
E. Lucas, Kirkland, Ill.
Alfred H. Newman, Chicago, Ill.
W. W. Kinnie, Beloit, Wis.
S. T. Goldy, Harrison, Ill.
H. W. Funk, Bloomington, Ill.
J. M. Valentine, Carlinville, Ill.
F. D. Nagle, South Haven, Mich.
D. S. McKinstry, Grant Park, Ill.
W. H. Bussey, Chicago, Ill.
Dr. J. H. Shultz, Logansport, Ind.
Geo. McCormick, Russell, Iowa.
S. E. Gernon, Waukesha, Wis.
D. Rawhouser, Columbus City, Iowa.
James Forncrook, Watertown, Wis.
V. M. Keeney, Shirland, Ill.
L. Highbarger, Adaline, Ill.
J. C. Newman, Peoria, N. Y.
E. F. Schafer, Chester, Ind.
G. L. Gast, LeClaire, Iowa.
Dr. S. Stevenson, Morenci, Mich.
Joseph Messimore, Millwood, Ind.
J. K. Snyder, Tiffin, Iowa.
Robert Cissna, Hageman, Ind.
L. H. Scudder, New Boston, Ill.
J. M. Hyne, Stewartsville, Ind.
Peter Dahl, Granville, Ill.
J. P. Dahl, Granville, Ill.
Chas. A. Campbell, Valparaiso, Ind.
Ira Bull, Valparaiso, Ind.
L. C. Wemple, Rogers' Park, Ill.
E. J. Oatman, Dundee, Ill.
Geo. Thompson, Geneva, Ill.
J. H. Reese, Austin, Ill.
H. Newhaus, Burlington, Wis.
A. D. Beckley, Rankin, Ill.
R. R. Murphy, Garden Plain, Ill.
W. S. Bennett, Beloit, Wis.
C. O. Seamans, Chesterton, Ind.
E. Whittlesey, Peeatonica, Ill.
C. W. B. Rust, Dover, Ill.
William Blake, Buchanan, Mich.
D. G. Webster, Blaine, Ill.
P. P. Nelson, Mankato, Ill.
James Marvin, St. Charles, Ill.
M. M. Baldridge, St. Charles, Ill.
Mark Davis, Lisle, Ill.
A. A. Rice, Davis Junction, Ill.
G. H. Shibley, Richmond, Ill.
John Hodgson, Pewaukee, Wis.
J. M. Burtch, Morrison, Ill.
H. D. Burrell, Bangor, Mich.
J. L. Gray, Lee Center, Ill.

LADY MEMBERS.

Mrs. L. Harrison, Peoria, Ill.
Mrs. C. C. Miller, Marengo, Ill.
Mrs. E. Lucas, Kirtland, Ill.

The following resolution was passed unanimously:

Resolved, That the editors of the different bee periodicals be requested to keep a standing notice in their papers requesting correspondents to add to their names, when writing for publication, the number of colonies they had at the commencement of the swarming season, and the number they had at the time of writing.

President Miller stated that such figures would aid all to understand the force and value of their remarks or reports, and serve to give a knowledge of their status as bee-keepers.

M. L. Trester desired to have a form of letter heading gotten up, stating the general occupation, if any, also bee and honey interest, and having blanks to be filled in with the number of the colonies, etc., which would be convenient for all honey producers.

The Syrian Bees.

George Thompson, Geneva, Ill., then addressed the Convention, as follows, on the Syrian bees:

This summer I have worked with some of my Syrians that are as vigorous, as gentle and as beautiful as the best of my Italians, and far more prolific; they had brood early and late, when the Italians had none.

It is well known by all those who have given any attention to scientific breeding that we can tone down any undesirable quality and raise all valuable points. Now, when we have found a bee that will breed late and early, thus in a great measure preventing death in winter, spring dwindling, and enabling us to have our bees in a condition in the spring to take advantage of the first honey harvest, then I consider we have made a long stride towards that bee of the future,—*Apis Americana.*

Has the Syrian bee proved a benefit? When the Italian bee was introduced, it was found, on trial, to be in many points, far superior to the black bee. It was, therefore, retained, and for years has been the favorite bee for the bee-keeper. But as time passed and knowledge increased it was found wanting, in some localities, in one important point, viz.: late and early breeding; for, as soon as the honey harvest begins to fail, the queen leaves off breeding, and unless the bee-keeper feeds back with a liberal hand to keep the queen up to her work, too many old bees go into winter quarters and one of the results that follows is, spring dwindling. What was wanted was, a bee that would breed late and early, and this has been found in the Syrian. Thanks to Mr. Jones and Frank Benton, the Syrian, not desirable in itself, owing to its irritable nature, by the cross with the Italian, I consider a valuable acquisition. In it we have obtained what we have long desired.

President Miller had a queen of the Jones importation of Syrians, and could see no remarkable results from her progeny.

A. D. Beckley said the Syrian bees bred early and late, and one colony gave him 400 lbs. of extracted honey; they were cross, but good workers. He preferred Syrian bees; his one colony had given him 9 swarms. His hive was a 9-frame Langstroth.

O. O. Poppleton asked if late breeding was any help in wintering bees?

Geo. Thompson: That is a very important point. My Syrians had brood when my Italians had none. I prefer the Syrians, crossed with Italian drones.

W. H. Bussey: I had 2 colonies late in September, 1881, and bred them up by feeding, but both died out during the winter.

Rev. D. Whitmer: I opened hives last Thursday and found in some 3 frames half filled with brood, while other colonies had none.

O. O. Poppleton: In the winter of 1872, while attending the Iowa State Fair at Cedar Rapids, Mr. Gallup and I went to the apiary of W. H. Furman in that city, and, upon examination, could not find six frames without brood, and yet I lost bees quite heavily that winter.

James Heddon: There are two classes of bee-keepers—one has an apiary in his head, the other has a real bee yard. Experience is what we want—we not only need statements, but logic as well. We have no fall crop of honey here. Spring dwindling results from dysentery, and young bees are more liable to be attacked with it. I think the quicker my bees stop breeding in the fall the better. I do not want young bees to winter successfully. Old bees are hardier. I want bees that know when to breed and when not to breed. I do not believe that pure bees are any better than those crossed for business—good qualities are what we should be careful to obtain and not so many bands; breed for business and not for white down, or hairs, or color. I would like to see the man who can determine the race of Cyprian, Syrian and Italian bees; I do not think there is one in this room that can tell them apart.

T. G. Newman said that he knew of an instance where some Italian bees had been pronounced pure Cyprians udge of foreign races of bees; it certainly was very difficult to determine.

Dr. Slade would like for Mr. Thompson to state the difference in marks, if he could, and to describe the pure Syrian and Cyprian bees.

Geo. Thompson said that Mr. Heddon was quite changeable; he once said as much against the Italian bees as he now does against the Syrians.

L. H. Scudder suggested that personalities should be omitted.

E. J. Oatman: The cross between the Italian and Syrian bees is not the bee of the future. Syrian bees are good workers, but there were serious objections to them. He had 4 colonies of Syrians which gave 1,100 pounds of comb honey—they were the first cross with Italians. The second cross were not over the average as workers. He did not want them and would give them all to Mr. Thompson, if he wanted them.

T. G. Newman asked if the cross was made by having Italian drones fertilize Syrian queens, or *vice versa?*

E. J. Oatman: They were Syrian queens fertilized by Italian drones.

Dr. Slade said his Syrian-Italians were very cross, and he did not like them. Early breeding was important to get ready for the white clover harvest, where they have one.

W. H. Balch: The best queens I have are those that were reared late in the fall. Their bees are the best for honey-gathering during the following summer.

James Heddon: Late breeding is not the cause of spring dwindling, but is an aggravation of the disease. I own up to the charge that I am changeable; if I were not, I should know but little. I believe that the brown German bees, crossed with the leather-colored Italians, are the best honey-gatherers.

E. J. Oatman: We have found the half-bloods (Syrians fertilized by Italian drones) gave us the most honey. The quarter-bloods are no better than others; but these crosses are vicious. One colony of them, at the close of the white clover season drove me out of the apiary, in spite of smoker, etc. I took them to an outside apiary and shall let them remain there until next spring, when I shall destroy them. They do not cap the honey so that it will look as white and nice as I want. When I put it on the market, it is worth from 2 to 5 cents per pound under price. The bees do not stay on the combs as well as Italians, either.

Mr. Gray said that his neighbor, Mr. Miller, had 1,000 lbs. of honey in the comb on Water St., and he could take any one and point out all the honey gathered and capped by the Syrians. He agreed with Mr. Oatman.

President Miller: As they gather so fast, do you not obtain enough honey to more than counter-balance the loss in price?

E. J. Oatman: No; it will not make up the loss in price when we market our honey. They are so cross, that I don't want them at all.

Geo. Thompson: Some are cross, but I breed from the less irritable colonies. I have not noticed the difference in the marketability of the honey.

H. W. Funk: I have tried them, and don't want the Syrian bees.

Dr. Stevenson: I had a lot of sections prepared for an exhibit at the Fair, but when I was ready to crate them for the fair, I found that, in about one-third of the sections, the cappings were so imperfect that the honey was exuding through them, but in this case the colony that gathered and capped the honey was a black one. Why was this so in one-third, and not so in all?

Geo. Thompson: What was the temperature of the room?

Dr. Stevenson: It is the same place that I keep all my honey. I don't know what the temperature was.

Mr. Gray: The honey gathered by the Syrians looks dark as soon as taken off the hive.

J. K. Snyder: Some of the honey gathered by the Italians also has this watery appearance.

James Heddon: If the honey is kept in a room where the atmosphere is cooler than it is outside, it will draw water like an ice pitcher does—we call it "sweating." The blacks make the best combs, thinner and whiter than any other bees, but when any race is shown to have honey of an inferior quality it is proof that they are not as good.

Geo. Thompson: Does it not depend on the season? When the honey comes in with a rush, do they not fill the cells too full?

E. J. Oatman: I think the rush has no effect on the bees; last year the honey flow was slow, but we had the same result with the honey.

Adjourned to 2 p.m.

AFTERNOON SESSION.

Met at 2 p. m., and the election of officers was then proceeded with, the result being as follows:

President—Dr. C. C. Miller.
Vice-President—James Heddon.
Secretary—Thomas G. Newman.
Treasurer—O. O. Poppleton.

The subject of over-stocking a locality was then discussed.

Pres. Miller: One year my bees increased from 150 to 250 by July 1st, and then the honey flow stopped; why, I do not know. I would give considerable to know how many colonies I can keep in one locality.

E. J. Oatman: I have no fears of overstocking a locality during a yield of honey, but in the fall 100 colonies is sufficient for any locality.

James Marvin once had 650 colonies in one location, four feet apart, and obtained a good yield, but they had never done so well since, because the basswood and other trees were felled and cut up by saw mills, that had been established in his locality, and consequently the honey yield had been cut off, to a very great extent. He had seen the time when the clover, after the thirteenth day of its bloom, had yielded honey so profusely that the locality could not be overstocked, but now the same locality would be overstocked by 50 colonies. One of his apiaries, containing 140 colonies, had increased to 250, and given 7,500 lbs. of honey—some of it being comb.

Pres. Miller said that D. D. Palmer once said he could keep 400 colonies in one locality and not overstock it.

L. H. Scudder: Mr. Palmer had 200 colonies in one apiary, and obtained an average of 400 lbs. to the colony, spring count, but he afterwards lost all of them by neglect. I lived five miles from him, and had only 100 colonies, but fell some short of his average.

George Thompson: Much depends on the man, the season and location. In my location 35 colonies is usually sufficient, but this year 1,000 colonies could have done well there.

P. Dahl took some of his colonies to his neighbors' buckwheat, but he could see no difference between them and those he left at home. Where 50 colonies starved one season 1,000 could not have overstocked the same location this year. It all depends on the season.

Planting Pasturage for Bees.

Pres. Miller: This leads us to a very interesting subject, that of planting for honey, and one that I want to know much about. I am willing to spend money and the labor of planting, if I can know just what to sow to make it pay, and return me money for my outlay.

James Marvin advised all to plant for honey, and especially recommended the planting of alsike and buckwheat for bees.

Pres. Miller said that there was one drawback to the planting of alsike—it did not re-seed itself; it often died out. He had tried to propagate it and failed.

G. L. Gast had planted a small patch with alsike, and it yielded hay as well as honey—better hay than timothy and clover—and last year it has re-seeded itself.

O. O. Poppleton had been told that alsike was considered by some to be a pest—that it would not permit anything else to grow, but he did not believe it. He had tried cutting it when it commenced to bloom, in order to have the second growth yield honey just after white clover ceased to be visited by the bees. This year, he intended to plant 20 acres or more of his farm to plants yielding honey alone.

Dr. Slade had some experience with melilot or sweet clover. The bees were working on it now. It had been browsed down by cattle and the second growth was yielding honey to-day.

T. G. Newman said that many of those present would remember, only a few years ago, when the question was asked at conventions and in bee papers: "Will it pay to plant for honey alone?" and the universal answer was, "No; plant only such as will be of value for honey and other things, such as fruit trees, berry shrubs, clovers, etc." But some three years ago, the BEE JOURNAL, of which he was editor, as all were aware—took a departure and advised the planting of *melilotus alba* or sweet clover for honey alone. Though it was, up to that time, universally discouraged, he was gratified to know that now all the progressive bee-keepers are advising the planting of it, as well as alsike and scores of other plants, for honey alone. There was no doubt now that it was the key to the situation. In vain we may look the world over for the best and most industrious bees, unless we provide them with plenty of pasturage. There was no use of denying it—by supplying our bees with bloom from clover and basswood till frost, we are causing a continuous honey flow, and, consequently, an unbroken income of gold dollars from spring till fall. Planting for honey will be the most popular advice, hereafter, and will be given by every progressive apiarist in America. In Europe they are also beginning to echo the same advice, and soon no one will willingly own up to the fact that he ever discouraged the planting of any bloom for honey alone.

W. H. Bussey: There is a large crop of sweet clover within five miles of the place of this meeting, at Austin, and he had seen the bees working vigorously on it within a week.

Thomas G. Newman said that nearer still, were acres of it—within one-quarter of a mile on all the vacant lots just south of Madison and west of Oakley streets. The birds had scattered the seeds and the bees were still reveling on the delicious nectar it provides. Its modest little blossoms would continue until long after winter's frost and snow had withered or buried all vegetation, and enveloped the land in its sheet of snow—then you may still see the tiny little flowerets of sweet clover rise amid wind and storm, and show its verdure and loveliness.

James Heddon: Will it pay to buy land, pay taxes and keep up improvements, say, with interest on the investment, about $5 per acre, to plant for honey?

Pres. Miller: I have confidence enough that it will pay, to say that I would be willing to yearly pay $10 per acre, for good pasturage for my bees.

James Heddon: Then as I am the first to occupy it, and as others will not be foolish enough to come into the territory I occupy with any other bees, think of the territory surrounding my apiaries that I am reaping a harvest from—the property of my neighbors. Is it to be wondered at that I look with a jealous eye at any one who would think of coming and occupying the territory with me—dividing my pasturage. Is it not a wise thing to keep others out of my territory?

Pres. Miller: There is a point of interest there, but what we want to know most is, what are the best plants to sow to cover the gap after basswood bloom until frost. I shall try sweet clover and figwort thoroughly.

James Heddon: Some 12 years ago I planted several kinds, but did not succeed to my satisfaction. I want a staple bloom and I believe sweet clover will fill all our expectation. It grows anywhere, in any kind of soil, on the poorest or best of land, in fact, no land can be so poor that it will not grow, thrive upon and enrich it.

L. H. Scudder advocated the planting of figwort (also called Simpson's honey plant and carpenters' square), and produced a handful of seed to show to the members of the convention. You can fill the gaps in fences and roadways by scattering it in the fall. It will grow readily and give the bees abundance of forage. One acre of figwort, cultivated as you would corn, will yield more profit in honey than an acre of corn. He had counted 100 seeds in one bulb.

Pres. Miller had counted these tiny seeds in one bulb and there were 104 of them.

Rev. D. Whitmer: I shall sow figwort for my bees. I sowed some sweet clover, but from some cause it never came up.

Geo. Thompson: Of all the plants to cover the gap from white clover to frost, sweet clover is the best. It is a biennial. I once sowed a lot of it in a small box and it did not come up; I was disgusted with it and threw it out; next year I discovered it where I had thrown it out, coming up as thick as hairs on a dog's back.

W. H. Bussey: It should be frozen to get it to bud. He had sowed it in the spring and thought it would not come up, but after a frost it came abundantly; one of its recommendations being that it thrives well in dry and hot weather.

Geo. Thompson: The reason for that is that its roots are as long as my arm and it goes down to the water.

President Miller: I sowed some sweet clover in July, but it did not come up very strong. I will let it stand and resow the same ground with it this fall. By sowing two years in succession on the same ground, we can obtain a continuous bloom every year.

James Heddon: I sowed sweet clover 6 or 7 years ago, and it is now as thick as ever—it does not die out.

L. H. Scudder sowed an acre in the fall and it did not come up, but he saved some of the seed till spring and then sowed it, and it came up very thickly.

President Miller had sowed it on rich ground, broadcast, but it was choked with weeds. It should be sown in drills, and the weeds should be kept down. He sowed figwort in drills and it did well, but when sowed broadcast the weeds choked it, and killed it all out. Some of the stalks of figwort were taller than he could reach, when on good soil, and kept well watered.

M. M. Baldridge: Sweet clover should be sown on two pieces of land, alternate years, because when planted both successive years on the same land, its profuse growth may choke it and the roots die out. There is an old law against planting sweet clover I think, and it ought to be abolished.

The President appointed L. H. Scudder and M. M. Baldridge a committee to present a resolution calling for the abolition of the law against sweet clover if it really existed in the State of Illinois; the committee to ascertain and report at the next meeting of the Society.

M. M. Baldridge: It never grows on pasture lands or in cultivated fields and it is not a noxious weed.

President Miller had seen it growing on blue clay and rocky ground, where nothing else would grow.

Peter Dahl had plenty of it growing and preferred it to ragweed.

Fuel for Smokers.

W. H. Bussey: What is the best fuel for smokers?

J. E. Hunter: Dry corn cobs split up.

O. O. Poppleton: Elm wood partially rotten.

Dr. J. H. Shultz: Refuse ax handles; they are hickory wood and when split up fine and cut short will last for hours.

Dr. Stevenson thought cotton rags are best.

Mrs. L. Harrison also uses and likes cotton rags in smokers.

James Heddon: Hard wood is objectionable; it makes too hot a fire, and runs creosote. Punk or rotten maple wood is best.

Geo. Thompson likes rotten apple wood best.

Adjourned to 7 p. m.

EVENING SESSION.

The Convention was called to order at 7 p.m. by the President, Dr. C. C. Miller, who stated that it was his desire to prevent increase as much as possible, in order to work for honey, and, therefore, in the absence of any thing else before the Convention for discussion, he would name as a subject

The Preventien of Swarming.

E. J. Oatman: As a rule the colonies that do not swarm do not give as good results as those that give, at least one swarm each.

Geo. Thompson: It adds to the quantity of honey gathered, to let them swarm, for it is well known that swarms gather more honey than old colonies.

E. J. Oatman: Yes; swarms work with more vigor, and gather more honey than older colonies.

J. E. Hunter believes that the clipping of queens' wings has an influence on swarming. Before he clipped the wings of his queens he was troubled with excessive swarming; since then, he has not. In the spring he had 90 colonies, and now he has 135.

James Heddon; One of the causes of swarming is that bees are dissatisfied with their queen; they will be more likely to swarm when the queen's wing is clipped. The bees thought, with him, that a queen with a wing clipped was not a whole queen. By giving the queen plenty of room and using comb foundation judiciously, swarming can be largely controlled.

O. O. Poppleton: I do not desire increase, and have had only 4 natural swarms this season. I believe with Mr. Heddon that by the use of comb foundation and giving the queen room, swarming may be controlled.

W. H. Balch: Does the clipping of the queen's wing prevent her from laying the eggs, which will fill the hive wit be swarming? If not, how does it prevent it? I clip the wings of my queens, and believe it to be an advantage, but do not know how it could prevent the swarming fever.

James Heddon: Bees are jealous of their queen, and do not like one that has her wings mutilated.

O. O. Poppleton: I have clipped the wings of a part of my queens, and can see no difference between them and those not having clipped wings. I shall clip one wing of them all, hereafter. The past season has been the greatest swarming season I have ever known.

Dr. Stevenson: I had 56 colonies in the spring, and have had 20 natural swarms. I follow the plan suggested by Mr. G. M. Doolittle, to prevent swarms, and I had no swarm issue until about July 10. One colony gave me 150 lbs. of nice comb honey. I now have 81 colonies.

President Miller: What is best for some persons, is not always the best for me. If I have all the bees I need I do not want increase, and am intent upon knowing how to prevent swarming. The bees acted differently this year than ever before. Swarm they would, despite all my efforts to the contrary—and swarmed even in the fall, a thing rarely known before.

James Heddon: Bees do not swarm when honey is coming in with a rush; let basswood yield honey profusely, and the bees find something else to do than to swarm.

Mrs. Harrison: When you can prevent bees from swarming, you may, perhaps, also find out how to prevent the human family from increasing. It is Nature's plan for perpetuating the race.

James Heddon: Yes; it is Nature's instinct for increase, and it cannot be prevented. It may be controlled some, or partially averted, but cannot be prevented.

Rev. D. Whitmer had found it impossible to control swarming, and will hereafter let them have their own way, and act out their natural instinct.

Peter Dahl: I let my bees swarm naturally until July 1, and then, as I have all the bees I need, I catch the queen, cage her, cut out the queen-cells, and return the swarm.

James Heddon did not believe in cutting out all the queen-cells but one and then expect that to give the future queen, with the best results. We could not be expected to select the best, when Nature had so arranged it, that the bees had 15 or more, queen cells to select from, in obtaining the future queen for the colony. We can control Nature in many things, and it will not always do to fold our arms and say, "Let Nature follow out its instincts." When we can improve on instinct, we should do it, as we do in dogs, cattle, chickens, hogs, etc., but we must also be careful not to change from Nature's instinct, the wrong way.

Feeding Bees.

QUESTION: "Does it pay to feed bees to keep them from starving?"

E. J. Oatman: Certainly; it will pay as well as to buy hay for our cattle in winter. I have tried it. Having had a poor honey yield one season we fed largely to save our bees from starving, and the next season we obtained at least 19,000 lbs. of comb honey which we should not have had, if we had permitted the bees to die, by neglecting to feed them. It is safer to feed sugar syrup than honey. The best way to prepare the sugar syrup is to procure extra confectioners' C sugar (it is just as good as A sugar for feeding bees) and make a syrup by mixing 5 quarts of water to 20 lbs. of sugar. We feed about the middle of September. If for later feeding, the syrup should be a little thicker—using more sugar.

James Heddon: As glucose is now being crystalized, we must look out for adulteration in granulated sugar, like all other brands.

L. H. Scudder: What temperature is required when making the feed?

E. J. Oatman: We simply stir the sugar well, to mix it with the cold water. We do not heat it at all.

James Heddon had excellent results from feeding for winter stores.

J. M. Valentine: As the honey crop, two years ago, was a total failure, I made sugar syrup, two measures of sugar to one of water, and gave 20 lbs. of this to each of my colonies of bees, and I lost only 1 colony out of 65. All of the hives contained more or less honey besides the feed I gave them.

James Marvin prefers honey to sugar for feeding bees, even at the same cost. He knew of instances where colonies had been fed 25 lbs. of sugar syrup and then had starved. If they had that much of good capped honey they would not have starved.

Adjourned to 8 a. m.

MORNING SESSION.

The Convention met at 8 a. m. according to adjournment. President Miller in the chair, who announced that the first question to be discussed was: "How to prevent the queens from going up into the surplus department and depositing eggs there?"

J. E. Hunter said that he had experienced difficulty in trying to prevent the queens from occupying the upper story of the hive with eggs.

O. O. Poppleton had no trouble in that line. He used the long-idea hive, containg 25 frames and no upper story. He had only one "double-decker" in his apiary of 150 colonies.

James Heddon did not like the long-idea hive. It was natural for the bees to store honey above the brood-chamber. That hive should be called, the "wrong-idea" hive.

L. C. Wemple brought a large sprig of figwort, which he had plucked on his way to the Convention, and placed it on the table for inspection. It had a host of bulbs with seeds, ready for harvesting.

J. E. Hunter: I extract only ripe capped honey, in order to get the very best article for placing on the market.

O. O. Poppleton: Deep frames are the best for the long-idea hives.

James Heddon: I often extract from combs having brood in them but prefer those without it. If the brood is uncapped the extractor gearing should be turned slower; there is no excuse for throwing out any larvæ, if care is taken in running the extractor. When the honey season is long drawn out, swarming is very much increased.

Comb vs. Extracted Honey.

Pres. Miller: One objection to the business of producing comb honey is the fact that, at the close of the season, there are so many sections only partly filled, and unmarketable. These must be extracted or the bees must take it out and deposit it below. I think it may be advisable to work for comb honey until clover bloom, and then for extracted, until the close of the season.

J. E. Hunter: As I keep all my honey separate, I extract the honey from the partly-filled sections at the close of clover bloom, and let the bees fill them with heartsease honey—my next crop.

O. O. Poppleton: I produce a little comb honey, as a fancy article, for my use, but I would only have it gathered before close of clover bloom.

V. M. Keeney: Will evaporating the honey in the sun, take away its flavor?

Geo. Thompson thought not. The flavor is all given to it before it is sealed over.

J. Heddon: It is almost impossible to retain the flavor of extracted honey after it leaves the comb—and that is the reason why nearly all prefer the comb to the extracted honey. They may say what they like; judge them by their acts, and, you will see that while they like extracted honey just as well as they do that in the comb—if you place both kinds before them, they take the comb, 9 times out of 10. It will candy quicker after it is taken out of the comb.

O. O. Poppleton: We can ripen the honey after extracting it, by placing it in open vessels and let the evaporation take place. Much of the honey that is marketed is not properly ripened, and if bottled up at once will often break the jars.

Thomas G. Newman said he once had a barrel of honey from Wisconsin that fermented and blew out the bung and wasted more than one-half of it. We could not be too careful in ripening honey, either by letting the bees do it before capping it, or let it ripen by being exposed to the air afterwards, before barreling.

M. M. Baldridge: I want the honey all sealed over before it is extracted. Then it will be safe to market it.

J. E. Hunter: I have kept honey in pails, had it candy, and warmed it to liquefy it, and find that the flavor was often improved by the warming. Care must be taken not to have it too warm, or the flavor might be gone. There is no fear of ever overstocking the market with a good ripe article of extracted honey.

How to get the Bees off the Sections.

Pres. Miller had been troubled very much to do it, and if any one had a better plan than he had, he would be glad to learn how to do it.

Dr. Stevenson: On a warm day, when the bees are flying, take off the sections one at a time; those partly filled put in a box all together, and let the bees clean the latter out when honey is scarce. The bees can generally be made to leave them by using the smoker.

James Heddon: My sections all have open tops, and it is the easiest thing in the world for me to drive out the bees by using a little smoke with a bellows smoker.

Pres. Miller: My sections all have closed tops, and I cannot get the bees out as Mr. Heddon does.

The Use of Separators.

John A. Williamson said he could not dispense with the use of separators in raising comb honey.

L. H. Scudder: Neither can I get along without them.

J. E. Hunter. I cannot; my wife forbids it.

J. C. Newman: I glass all my honey, and I cannot get along without separators. I use them made of very thin wood, which will not bend out of place nor kink, and they cost but little. I use a comb honey rack, and have all my sections nicely sand papered.

James Heddon: I formerly did the same thing, but those extremely white sections formed a contrast with the honey, and I found it a detriment. Then they often got dirty and looked worse than those that had not been as white.

Mrs. L. Harrison: I do not use separators, starters, nor comb foundation in my comb honey. I use a line of wax simply, but I find that the bees sometimes not only build the comb crooked, but actually build them crosswise of the section boxes. Then we have to sell them at home.

L. H. Scudder: I have to change from two pound sections to one pound, and as I have to purchase all new separators, if I can get along without them I want to do so, and I would like to know how to do it.

E. J. Oatman: I have always used separators; there is nothing to be gained but the expense of cost saved, and as I have them already I see no reason in desiring to do without them.

James Heddon: I have used separators and discarded them, but I intend to give them one more trial for the purpose of finding out how much it will cost me, in honey, to use them.

Dr. Stevenson found that, when taking the combs apart, sometimes they were injured by being attached by small pieces of comb, one to the other—but usually they were quite straight and so good as to allow him to take the first premiums at fairs over those who used separators. He used no separators, but did use thin foundation.

Mrs. L. Harrison: Does not the inclination of the hives sometimes control the matter of building combs straight. I do not use comb foundation in comb honey.

Dr. Stevenson: I discarded the use of separators on account of the cost, and the fact that bees lengthen the cells in the spaces above and below.

Peter Dahl: I do not use separators, and there are not two sections of honey in a hundred that I cannot use and market.

O. O. Poppleton: I use sections 1¾ inches in width and do not need separators.

James Heddon: I use sections 4¼x4¼, 1¾ inches in width, and narrow tops. Can good one-piece sections be made of that width, and with the bee opening at the top and bottom, of the full length of the section and of ⅜ inch in width.

James Forncrook: I have made one-piece sections in that way already; they can be made any way that bee-keepers want them.

Mr. Carson said he had been successful with one pound sections made 2 inches wide, and used them without separators.

He produced a case showing how he used them, and to prove his assertion that he could get good straight combs without separators.

The case was duly inspected by the President, and pronounced very imperfect. Several combs had been connected by pieces of comb, built between them, and many of the sections were built so crooked that they could not be packed for market without touching one another.

The Use of Comb Foundation.

James Heddon: Modern bee culture is very modern. It *grows* daily. A book, written on the most progressive ideas and methods of management, is soon behind the times. The ink is hardly dry, before some of it needs to be re-written, with newer thoughts and views. The use of comb foundation is a growing subject; we want the best article and the best methods of using it. I believe that the foundation made on the Given press is the best that is now made, because the side walls are soft and can easily be drawn out, while the bases of the cells only are thin and hard pressed. The bees will manipulate it much more readily than any other I have ever used. The *thin*, used in sections, should be the full size of the sections, leaving ¼ inch space, each side, and ⅜ of an inch at the bottom. I would not use the best natural comb in sections if I could get soft foundation; the bees will use the latter so much more readily.

Mr. Heddon here exhibited a super of his one pound sections, and showed the manner of its use on the hive.

H. D. Burrell: I find that comb foundation that has been made sometime is just as readily received by the bees as that just made.

O. O. Poppleton had used it very extensively, and found that the bees would draw out the side walls of the cells in 48 hours or less.

Pres. Miller: I find that comb foundation, when piled together, will keep much better than when exposed to the atmosphere.

Adjourned to 1:30 p. m.

AFTERNOON SESSION.

Pres. Miller called the Convention to order at 1:30 p. m., and announced that the next topic for discussion was

Wintering Bees.

James Heddon: The objection to cellar wintering is the expense. The cellar should have a plenty of pure air, with the temperature never below freezing, and the bees should be fed on pure sugar syrup. Pollen is the bane; it floats in the honey, and causes dysentery. Sugar syrup is best for winter food for bees.

J. E. Hunter: I do not believe that bees get enough pollen in the honey to do harm, but I have no doubt that pollen stored in the comb is often the cause of dysentery.

E. J. Oatman: Our loss of 50 per cent. of our bees, in 1880, was due to dysentery. I do not believe that bees should have pollen in winter.

James Heddon: My bees stored lots of pollen this fall, and I feared the result, but the weather has been so pleasant that breeding has used it up, and I have no fears now of success in wintering my bees.

L. H. Scudder: How do you prevent the bees from storing pollen while you are feeding them with sugar syrup?

James Heddon: Bees will not gather pollen, because they are fed syrup. With my feeders, holding 2½ lbs. each, I can give them enough for winter in 48 hours, and during this short time no pollen is gathered.

L. H. Scudder: The trouble is that the labor of extracting the honey in the fall and the cost and labor of feeding sugar syrup, will be more than the worth of the bees.

A. A. Rice: I would like to know how to prepare the sugar syrup.

James Heddon: Not knowing just when the honey season will close, we often get belated in feeding, in which case I prepare my feed as follows: 4 lbs. of water, 10 lbs. of granulated or confectioner's A sugar, and a piece of tartaric acid of about the size of a pea; bring to the point of boiling, and boil for a few moments. When lukewarm it is ready to feed.

E. J. Oatman: In the normal condition, when bees are wintered on the summer stands, the bees will not come out except when the weather is favorable. I have been asked why I have changed my plan of wintering from the cellar to that of packing in chaff on the summer stands, when we were so successful with wintering in cellar. In reply I would say that it was not because we were not successful, with that method, but because we had no good cellars in some of our apiaries. We now winter on the tenement plan —by putting clusters of 4 hives of bees together, two facing east and two facing west, and pack each four with chaff. It costs but 10 cents more to thus prepare 4, than it would to pack one.

Pres. Miller: But why did you change the manner of your wintering bees in your home apiary, where you had a good cellar? Is it not more expense to pack them in chaff than to carry the bees into the cellar?

E. J. Oatman: Yes; but I think it safer to do so.

Pres. Miller: Why?

E. J. Oatman: Because they have more pure air.

Pres. Miller: That is the point. Then if I give my bees pure air in the cellar, is it not as well as to pack them in chaff?

J. E. Hunter: I ventilate my cellar with a pipe and keep the temperature even.

T. G. Newman: At about what temperature do you keep the cellar during the winter?

J. E. Hunter: At about 40 or 50 degrees, but 45° is the best and safest. I have a pipe from the outside to let in pure air, and one leading to the chimney to carry the foul air out.

Pres. Miller: When warm air is desired for the cellar the outer end of the pipe must be lower than the end inside.

A. A. Rice: Yes, and it must have ventilation to let the foul air out, or you can never get pure air in, because the foul air will rise to the top of the cellar and stay there, unless there is a manner of escape provided for it.

John Hodgson had 70 colonies in the cellar, and ran a pipe 150 feet to admit warm and fresh air.

The articles on exhibition were:

Bingham's Conqueror Smoker, Dr. Thurston's Wire Frame-Holder, Scovell & Anderson's Improved Smoker, Bees from Rev. D. Whitmer's Apiary, Bull's Spacer for the bottoms of brood frames, etc.

The Convention then adjourned to meet on Wednesday and Thursday of the last week of the Chicago Exposition, of 1883. C. C. MILLER, *Pres.*

THOS. G. NEWMAN, *Sec.*

Lebanon, Ind., Convention.

Quite a number of persons interested in bee culture met in the Court House, Lebanon, Ind., at 11 a. m., Monday Oct. 9, 1882; and effected a temporary organization, by electing Dr. O'Rear, of Lizton, Hendricks Co., President, and W. P. Parr, of Lebanon, Secretary.

The President briefly stated that the object of the meeting was the organization of a county society, auxiliary to the Indiana State Bee-keepers' Association, and a committee, consisting of Geo. W. Smith, S. H. Lane and F. B. Williams, was appointed to draft a constitution and by-laws with instructions to report at the next meeting, Dec. 2, 1882.

The following permanent officers were then elected: Geo. J. Frey, President; Geo. W. Smith, Vice President; S. H. Lane, Secretary and Treasurer; after which adjournment was taken until 1 p. m.

The association re-assembled at the appointed time, and, after being called to order, the following persons signified their purpose to become members of the association by paying the initiation fee, 75 cents (which also entitles them to full membership in the State Association), and they will sign the constitution and by-laws at the December meeting: Geo. J. Frey, Ora Knowlton and Miss Anna F. Weitzel, of New Brunswick; F. B. Williams, Geo. W. Smith, Adolphus Joyson and Miss Maggie O. Smith, of Lebanon; S. H. Lane and W. R. Bohanon, of Whitestown; H. Cox, White Lick; John J. Goldsborough, Thorntown; William S. Smith, Phillip W. Beeler, Zionsville.

The afternoon was spent in the discussion of various questions relating to the best method of wintering bees, how to obtain the largest yield of honey, etc. Dr. O'Rear exhibited a case of Cyprian bees, and a queen supposed to be better than the Italian bee.

Mr. Frey had quite an assortment of comb foundation and some new styles of smokers.

One of the ladies gave the following receipt for a cup cake: 2 cups of honey, 1 cup of butter, 1 cup of sweet milk and 3 eggs; warm the honey to make it thin; use baking powder.

This meeting developed quite an interest in beeology, and there is no doubt but that the next meeting of the association will be interesting and profitable.

The following programme was arranged for the next meeting: How to produce the most extracted honey—Geo. J. Frey, Lebanon; The most convenient hive—F. B. Williams, Lebanon; Wintering bees—S. H. Lane, Whitestown; Honey in best marketable shape—Geo. W. Smith, Lebanon; Queen breeding—A. Cox, White Lick; Best method of producing comb honey—W. R. Bohanon, Whitestown; Forage for bees—Ora Knowlton, New Brunswick; Increase of bees—J. J. Goldsborough, Thorntown.

Essays—Miss Anna Weitzel, New Brunswick and Miss Maggie O. Smith, Lebanon, who will select their own subjects.

Saunders County (Neb.) Convention.

The Saunders county Bee-Keepers' Association, held its semi-annual meeting at Wahoo, Oct. 7th, 1882. After the opening of the meeting, reading and approval of the minutes of the last meeting, and the treasurer and secretary's reports, the following officers were elected for the ensuing year: President, C. C. Gurney; Secretary, J. J. Burtch; Treasurer, S. V. Decker; Vice President, L. P. Whitbeck; Keeper of Supplies, G. Rouse.

The meeting was then open for general discussion, and quite an interesting discussion ensued on the price of bees, the preference of Italians over black bees, wintering bees, the color of Italian bees, etc. It was then announced that the State Bee-Keepers' Association wished to hold its annual meeting at Wahoo, and a motion was unanimously carried that we send them a pressing invitation to meet at Wahoo, next January. After some experience had been given in bee culture, the meeting adjourned.

MRS. C. L. STOCKING, *Sec.*

☞Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

Local Convention Directory.

1882. *Time and Place of Meeting.*

Nov. 1—New Jersey & Eastern, at New Brunswick.
J. Hasbrouck, Sec., Bound Brook, N. J.
3.—Iowa Central, at Winterset, Iowa,
Henry Wallace, Sec.

1883.
Jan. 16.—Eestern N. Y., at Albany, N. Y.
E. Quakenbush, Sec., Barnersville, N. Y.
16-18, Northeastern, at Syracuse, N. Y.
G. W. House, Fayetteville, N. Y.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

☞The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning County, in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th.

LEONIDAS CARSON, *Pres.*

☞The Iowa Central Bee-Keepers' Association will hold its annual meeting at the office of Graham & Steel, Winterset, Iowa, on Friday Nov. 3, 1882, at 10 a. m. All interested in bee culture are invited.

HENRY WALLACE.

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00.,	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 60
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 6 above-named papers	6 00..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

The Monthly **Bee Journal** and any of the above, $1 less than the figures in the last column.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

A STATISTICAL TABLE.

The Committee on Statistics, appointed by the Northwestern Bee-Keepers' Association, at Chicago, Illinois, on October 18-19, 1882, reported the following Tabular Statement, showing the number of colonies of Bees, owned by fifty of the persons present, who had reported, and the amount of honey produced by them; together with other items of interest:

NAME.	RESIDENCE.	OCCUPATION besides KEEPING BEES.	Number of Colonies last Fall.	Number of Colonies lost in Winter.	Number of Colonies lost in the Spring.	Number of Colonies beginning of season.	No. Colonies used for other than honey.	Number of Colonies on hand now.	Number of pounds of Comb Honey.	Number of pounds of Extracted Honey.	HOW WINTERED.
Dr. C. C. Miller,	Marengo, Ills.,	None,	177	1	1	174	....	202	15,500	....	Cellar.
O. O. Poppleton,	Williamstown, Ioa.,	None,	136	1	1	133	....	151	60	15,300	Chaff hives.
James Heddon,	Dowagiac, Mich.,	None,	200	20	5	175	....	406	4,500	5,000	Chaff packing.
L. H. Scudder,	New Boston, Ills.,	Farmer,	35	2	....	63	....	145	9,000	....	Cellar.
J. Oatman & Son,	Dundee, Ills.,		232	....	3	229	....	350	26,000	100	Chaff packing.
N. Resser,	Geneseo, Ills.,	Farmer,	148	2	27	119	....	266	8,000	300	Cellar.
T. S. Bull & Sons,	Valparaiso, Ind.,	Farmers,	200	....	....	150	....	210	400	10,600	Cellar.
I. R. Good,	Nappanee, Ind.,	Qu. breeder,	147	4	....	143	50	225	1,500	500	Chaff packing.
Jas. M. Marvin,	St. Charles, Ills.,	....	210	2	1	160	....	260	5,200	10,500	Cellar.
D. G. Webster,	Blaine, Ills.,	....	117	2	5	110	....	225	4,000	1,000	Cellar.
H. D. Burrell,	Bangor, Mich.,	....	104	4	....	101	....	137	6,500	2,500	Chaff packing.
Jno. A. Williamson,	Lodge, Ills.,	Farmer,	31	....	....	31	....	72	3,770	....	Chaff packing.
Daniel Whitmer,	South Bend, Ind.,	Farmer,	78	2	....	76	....	108	2,500	500	Chaff packing.
Dr. S. Stevenson,	Morenci, Mich.,	Physician,	48	....	....	48	....	81	3,020	....	Chaff packing.
A. B. Miller,	Wakarusa, Ind.,	Bee Supplies,	23	2	....	21	....	44	1,000	100	Chaff packing.
J. K. Snyder,	Tiffin, Iowa,	....	46	....	2	44	1	88	500	8,300	Chaff packing.
E. Lucas,	Kirkland, Ills.,	Farmer,	50	....	2	48	....	68	6,000	....	Cellar.
John Hoover,	New Boston, Ills.,	Farmer,	8	1	....	27	....	75	2,000	200	Cellar.
David Rawhouser,	Columbus City, Ioa.	Carpenter,	15	....	....	15	....	47	3,200	....	Cellar.
S. E. Gernon,	Waukesha, Wis.,	Farmer,	67	....	7	60	....	105	6,400	2,000	Cellar.
H. W. Funk,	Bloomington, Ills.,	....	80	2	3	75	....	125	8,000	7,000	Chaff packing.
L. Highbarger,	Adaline, Ills.,	Farmer,	12	....	....	12	....	36	1,000	200	Out, unpacked.
J. M. Valentine,	Carlinville, Ills.,	Bookseller,	63	4	....	59	....	121	2,000	6,000	Bee house.
G. L. Gast,	LeClair, Iowa,	Farmer,	76	1	5	70	....	145	4,800	100	Chaff & Cellar.
W. H. Bussey,	Chicago, Ills.,	Boots & shoes	10	2	1	7	....	13	150	200	Chaff packing.
D. S. McKinstry,	Grant Park, Ills.,	Stock Raising	16	....	2	14	....	19	610	800	Cellar.
Peter Dahl & Bro.,	Granville, Ills.,	Carpenters,	170	8	2	160	....	220	7,000	400	Cellar.
V. M. Keeney,	Shirland, Ills.,	Farmer,	38	....	....	35	....	54	1,500	1,600	Cellar.
Jos. Messimore,	Millwood, Ind.,	Farmer,	25	3	....	22	....	35	200	200	Chaff packing.
J. E. Hunter,	Wyoming, Iowa,	None,	100	4	1	95	....	135	3,000	3,500	Cellar.
E. Whittlesey,	Pecatonica, Ills.,	Farmer,	33	....	....	32	5	62	1,500	1,500	Cellar.
C. A. Campbell,	Valparaiso, Ind.,	Farmer,	30	....	....	30	..	57	....	1,200	Cellar.
Mrs. L. Harrison,	Peoria, Ills.,	....	47	2	....	45	....	87	4,000	1,000	Chaff packing.
M. L. Trester,	Lincoln, Neb.,	Farmer,	11	....	....	20	....	54	500	2,500	Cellar.
Henry Newhaus,	Burlington, Wis.,	....	92	....	....	34	....	110	3,000	1,500	Cellar.
R. R. Murphy,	Garden Plain, Ill.,	....	62	....	2	60	....	95	2,700	5,600	Bee house.
J. C. Newman,	Peoria, N. Y.,	Farmer,	73	11	....	123	....	170	4,000	1,760	Chaff packing.
L. C. Wemple,	Rogers Park, Ills.,	Patterns,	16	....	....	21	....	42	100	200	Packed in hay.
Wm. Blake,	Buchanan, Mich.,	Farmer,	24	....	1	22	....	60	1,600	500	Bee house.
P. P. Nelson,	Manteno, Ills.,	Farmer,	21	....	1	20	....	40	1,800	1.200	Packed in hay.
J. M. Hyne,	Stewartsville, Ind.,	Farmer,	16	....	....	16	....	50	300	300	Chaff packing.
John Hodgson,	Pewaukee, Wis.,	Farmer,	75	....	4	67	....	115	5,000	1,800	Cellar.
Samuel Carson,	Chatsworth, Ills.,	Milk Dealer,	12	....	1	22	2	42	950	1,100	In a cave.
G. H. Shibley,	Richmond, Ills.,	Farmer,	2	1	...	29	4	54	600	1,600	Cellar.
A. Rice,	Davis Junction, Ill.,	....	50	3	....	10	....	42	1,200	....	Cellar.
F. D. Nagle,	South Haven, Mich.	Fruits,	26	....	....	26	....	36	1,500	1,500	Chaff packing.
Mark Davis,	Lisle, Ind.,	Farmer,	6	1	....	5	....	9	.... ..	800	Out, unpacked.
R. S. Johnson,	Lockport, Ills.,	....	54	....	2	52	....	101	650	6,500	Bee house.
J. Forncrook,	Watertown, Wis.,	Sections,	25	....	....	9	....	28	400	500	Cellar.
C. W. B. Rust,	Dover, Ills.,	....	2	....	....	3	....	10	400	....	Cellar.
			3365	85	79	3140	62	5432	169,010	107,900	

CORRESPONDENCE.

For the American Bee Journal.

Bees and Honey Thieves.

A. R. KOHNKE.

On the 7th of last June, a honey thief from Colmac, Germany, who systematically plundered the apiaries of the valley of Muenster, was sentenced to 6 years in penitentiary.—*Alsacian Bienenzeitung.*

Another German exchange states, that the bee-keepers of a certain district in Northern Germany petitioned the Government officials to be permitted to lay iron fox or wolf-traps to catch bee thieves who stole their bees or took the honey and thus ruined the colonies. The petition was granted, provided the apiaries were enclosed by a fence.

Now and then we hear in this country of such depredations, and perhaps but very few of such cases are reported. Honey is sweet; but stolen honey seems to some people the sweetest of sweets and before you are able to raise the morals of the community to a higher standard so that they will let your bees alone, your best colonies may be ruined.

Different bee-keepers advise and use different precautions, among which are high, tight board fences, in addition to which a barbed-wire is run on top; others use a barbed-wire fence only; still others advise a bull dog, and some one advised an electrical alarm.

It will not be necessary to state my objections to arrangements I do not use, but I prefer the electrical alarm as the most reliable and least expensive. I am surrounded by some of the worst elements of society—miners and mill hands—but as soon as the bees were put on their stands I put up the alarm. Suspicious looking characters would come along and inquire about the object of those wires "they were certainly too high for clothes lines." I would tell them, I meant to use them to blow up thieves by electricity, and no one ever ventured to come into the garden after honey, fruit or vegetables, while my neighbors were robbed by, perhaps, strikers.

Now to construct or put up such an alarm, one should not apply to an electrician. I tried one, he wanted $3.50 per hive, besides $7.00 for the alarm proper, and about $4.00 for a three-cell battery. Then I went to work and made everything myself, buying the material only, which did not come to more than about $8.00, and the connections for each hive can be made for about 25 or 30 cents. They are made of small plates or pieces of sheet copper or brass, which touch when the hives are closed; the alarm being arranged on the closed circuit principle, as soon as a hive is opened or moved the circuit is broken and sets the alarm bell ringing; it will be seen that by cutting the line, as some one hinted to me, nothing would be gained, but set the alarm going in a moment. The cost of running the alarm is very small, not more than a dollar a month, at the utmost, for any number of hives.

To describe my arrangement minutely would take too much space at present, but should there be a demand for it I may do so at some future time.

Youngstown, O.

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Rural New Yorker.

How to Winter Bees.

PROF. A. J. COOK.

As the winter again approaches, bee-keepers begin to inquire how they may safely winter their bees. This matter of wintering is the only element in apiculture that is precarious, and when we remember that such men as John Davis, of Michigan, with his scores of colonies, and O. O. Poppleton, of Iowa, with his hundreds of colonies, and D. A. Jones, of Ontario, with his thousands, all located in the cold, bleak North, winter without loss every winter, may we not conclude that wintering is only precarious as men are ignorant or careless? With the requisite knowledge, and an equal amount of care, it is more than probable that universal success might come with every winter.

As Mr. Poppleton says, to insure safe wintering, preparation should commence early in the season. The colonies should be kept strong, and should be kept breeding, by stimulative feeding if that is necessary, till well into September, that there may be the proper number of young bees. Some bee-keepers ridicule this idea, but such men as Jones hold it to be very essential.

As soon as frost comes, at least as early as October 1st, when the work of the year is over, the bees of each hive should be given at least 30 lbs. of good capped honey in frames that are at least two-thirds or three-fourths full. If from too close extracting, or a poor honey yield, the requisite amount is not in the hive, then the bees should be fed at once that they may have time to get all capped before the cold weather prevents work. Don't guess at the amount of honey, but weigh, that there may be no mistake. For feed, we may use good extracted honey, or, better still, granulated sugar made into a rich syrup by dissolving in water and heating till it boils. If we use hives with tight-bottom boards we can follow Mr. D. A. Jones's method, and turn the honey right into the back of the hive after we have raised the front. If we have separate bottom boards we may use any of the convenient feeders. In feeding we must be careful to feed late in the day, and not to spill any feed about the apiary, or we may have trouble with robbing. Should any bees get to robbing, which will be denoted by fighting and a great commotion in front at the entrance of the colony being robbed, we should either cover the entrance of this hive with wire gauze, or else nearly close it with blocks. In two or three days the entrance may be again opened.

After we have given the bees sufficient food, we should, by the use of the division board, confine the bees on the frames which contain their stores, and exclude all others, so that the bees will have only to warm the part of the hive actually used. Above this chamber we should place fine, dry chaff or sawdust, which, for convenience and neatness, had better be confined in a sack. If we are to winter out-of-doors, either in chaff hives or with chaff or sawdust packed about our hives, we should put similar chaff or sawdust cushions at the sides of the winter combs, just outside the division boards, which latter had better not reach quite to the bottom of the hive.

In all the combs to be used in winter there should be cut a small central hole, so that the bees can easily pass through from one comb to another. These may be cut when we weigh the combs.

Many, with Mr. Poppleton, prefer chaff hives. These are double-walled at the ends of the frame, with a six-inch space filled with fine chaff. Thus we see that with the cushions already mentioned the bees are surrounded on all sides with a protection from the cold. By the use of chaff hives their friends claim that they can winter successfully, and that they are protected against "spring dwindling." Others object to the cost of these hives and to their weight, which makes them hard to handle, and many think them unsafe in very cold winters, perhaps because they were not fairly tried.

Owing to these objections, others, who wish to winter on the summer stands, place a box outside of the hives, leaving a space of ten or twelve inches, which they fill with chaff or sawdust. It is arranged so that the bees can fly if the weather is so warm as to incite activity, with this protection. Expense and ill success have robbed this method of many of its friends?

Probably no method has so many friends in the Northern States, where wintering is a vexed question, as that of cellar wintering. This is high praise for the cellar, as there are so many poor cellars that we should expect too many failures to keep this style of wintering in good repute. If we may judge from experience, a properly constructed cellar, with the proper preparation already referred to, will never fail.

The cellar should be entirely beneath the earth, and be so ventilated that the air should always be sweet, and the temperature always uniform at about 45° F. While it should never be more than two degrees warmer than this, it will do no harm if it is five degrees colder at times. The best way to secure this is by sub-earth ventilation. A four-inch pipe should extend from the bottom of the cellar to connect with a stove-pipe in the room above. From near the bottom of the cellar there should be another pipe (six-inch tile is the best) extending for 80 feet through the earth, running below the frost line and then reaching the surface of the earth, where it should be protected by wire gauze, so that vermin could not enter the pipe. We see that as a fire is built in the stove the air is drawn from the cellar and is supplied by the sub-earth pipe. This cools the air when the weather is warm and warms it when it is cold. I have known such a cellar to be in successful use for nearly half a score of years; and several others for a less time. Some secure ventilation by the usual means and keep the right temperature by a refrigerator, a cistern in the cellar, or a stream of water passing through it. The sub-earth plan is the most scientific, and works best. The cellar should be dry and quiet.

The bees should be removed to the cellar before winter sets in. The hives should be dry, if possible, when put in, and the bees should be set in so quietly that they would not be disturbed. Once in, we remove the covers, leaving the cushions on and opening the entrances. Thus arranged, we may leave the bees till the pollen of April bids us to prepare for the work of a new year.

The only valid objections to cellar wintering is the labor of moving the bees and the danger of spring dwindlings. The expense of moving is less than that of either of the other methods, and, if we properly confine the bees by use of the division board as they commence to work in spring, we may have no fear of dwindling, especially if we have such a cellar as suggested above.

Lansing, Mich.

For the American Bee Journal.

Bee and Honey Show at Baltimore.

C. H. LAKE.

Dear Editor—I see by this week's issue of the Journal you failed to receive several copies of our daily publications containing accounts of the great fair.

You will see our exhibit was an independent one, but no others entered the contest and we had a one-sided one, so to speak. Some how we can not get the bee-keepers to show their products at the fairs. The small premiums offered by most societies will not pay the trouble—is one great drawback. I don't know of another society in the State of Maryland that offer over $3.00 in the apiarian department, except Baltimore, and the increase of premiums of this society is due to your article upon the subject, about two years ago. I placed it in the hands of the society and at their annual meeting it was argued and a portion of the premiums as recommended by you adopted as follows:

For Best Colony of Italian Bees in Movable Combs	$5 00
For best display of Bees including their public manipulation	5 00
For best 10 lbs. Comb Honey	2 00
For best display Extracted and Comb Honey.	2 00
For best Crate of Honey ready for shipping..	2 00

A second premium is also offered on the same exhibit, making about $20, offered as premiums in this class.

In the implement or machinery departments any new feature can be entered, as any labor saving implement for any purpose, the award of premiums to be from the societies—medals to a diploma, or equal cash premiums, as the exhibitor chooses. Under this head we are compelled to enter our hives, foundation machinery, extractors and whatever new things may be tried or proved worthy; all old articles, as those used at an early date, being ruled out.

Now, it would be much better for all agricultural societies, offering bee-keepers any inducements to show their products, to make one class of everything that bee-keeping requires, and have competent judges that know their business in this respect—especially on articles of known merit. As an illustration of this, one of our workmen conceived the idea of an automatic self spacer for the brood-chamber, something that every bee-keeper in the land that uses a bar hive requires. The device was duly entered but no committee came to examine it, consequently it went by unnoticed except by bee-keepers, who were universal in their decision of its being the "best thing out." I will send you a set of Langstroth frames with the appliance all ready, and they will "speak for themselves" as it would require too much writing to give a clear description of them at this time. A new feeder, also was passed by for the same reason.

Our exhibit was the largest ever seen in the State, and, as we went more for the benefit of advertising our business than the small premiums offered, we were well rewarded for the effort it cost us.

Baltimore, Maryland.

Scientific American.

Irritating Effect of Bee Stings.

PROF. A. VOGEL.

It is well known that the effect of a stinging nettle on the skin agrees very closely with the sensation produced by the sting of a bee or wasp. But the great similarity is not limited to the feeling it causes, but, what may not be so generally known, the cause of the irritation is essentially the same. It may be considered as definitely settled that formic acid is present in the poison sac of the bee sting, in the so-called bee poison. The same corrosive acid also occurs in the sting of the nettle. Some species of caterpillars have formic acid in some of their hairs, which they seem to shake off at will, and when a person touches such a caterpillar the poison penetrates the skin whenever it is moist, and causes burning, itching and inflammation. These poisonous members preserve their irritating powers, even after the death of the worm. This accounts for reliable statements that visitors to collections of caterpillars have suffered from exanthematous eruptions on the neck. "Many hairy caterpillars cause itching and burning of the skin when touched, and sometimes it gives rise to swelling and redness. This depends on the fine hairs, which produce the same effect when they float around the air. Many ladies who visited the caterpillar room of the naturalist Reaumer had a breaking out on the neck."

In the sting of the bee, wasp, hornet, etc., a minute drop of a transparent liquid may be observed on the sting, and is called "bee poison" (formic acid). It penetrates into the wound produced by the sting, and causes the well known effects. It would, however, be a great mistake to assume that the only object of this is to increase the effect of the sting, that is, that it serves only to injure. It has a far more important purpose, namely, to prevent fermentation and decay. The celebrated bee cultivator, Holz, reports that in his long experience with honey, that which came from what are called "ranchorous swarms" (boshaft) had peculiar properties. It always had a bitter, harsh taste, and its smell was sharp too. How can the character of the swarm affect the smell and taste of the honey they gather? We know that bees, when they are disturbed, run out their stings, on the end of which may be seen a tiny drop. This little drop, as we have already said, is bee poison, or formic acid. When the disturbance is at an end they draw in their stings again, but the little drop of liquid does not go back with it, but is wiped off on the comb, and sooner or later gets mixed up with the honey. This explains why the honey from such excited bees tastes and smells sharper than that from peaceable bees. Excitable bees will rub off this little drop of formic acid more frequently than other bees; perhaps a larger drop is formed by nervous bees than those that are not nervous, and hence the honey is much richer in formic acid. This acid is never absent in genuine honey, but the amount differs. This contamination is not only uninjurious but very useful, in fact necessary, for it keeps the honey from spoiling; we know, indeed, that purified honey, from which the formic acid has been removed, very soon ferments, while unpurified honey will keep unchanged for years. Nature furnishes the bees with this knowledge instinctively, and therefore they do not carry this drop of formic acid away out of the hive. Bee connoisseurs assure me that the bees add to it the nectar which they collect that is free from it so as to make it keep, and they do this in places where they are not disturbed, too.

Bee stings are often spoken of in agricultural and popular papers as a remedy for rheumatic affections, and numerous cures are adduced to prove it. If the formic acid that accompanies the sting can be looked upon as the principal agent in the cure, it would be worth while to try the experiment of rubbing the spot with this acid or injecting it under the skin so as to avoid the somewhat inconvenient method of applying live bees.

Two hundred years ago formic acid was made from the brown wood ants, by triturating them with water and distiling it. The liquid acid was used to irritate the skin. The reddening of the skin, by using baths of pine leaves, is also due to the action of formic acid. The anti-fermentative action of formic acid has also been long recognized.

As regards the irritative action of stinging nettles and other similar vegetables, it depends, as already stated, on its formic acid. The point of the nettle is brittle as glass, and by the lightest touch penetrates the skin and breaks off, pouring out its acid and causing the burning sensation.

Frequent mention has been made of formic acid. In conclusion it may be stated that it gets its name from the ant (*formica*), because it was first found in them. If it had been first found in the bee or nettle it would have received another name. If an ant runs over a piece of blue litmus paper he will leave a red streak. Put a stick in an ant hill and they will squirt strong acid on it.

Munich, Germany.

SELECTIONS FROM OUR LETTER BOX

Building up Colonies.—I commenced July 8th, with 6 nuclei, which are built into strong colonies, except two, which I have just united. Pasturage here is fine and I will go into the bee business on a larger scale, if I find myself adapted to it. I will winter in A. I. Root's chaff hives, on summer stands and amuse myself this winter in making hives and frames. Please let me know the best and quickest way to stock up, supposing I have hives and frames with only foundation and no combs, can I build up colonies in these, simply by giving one-half pound of bees, purchased elsewhere, and giving them queens of my own rearing, without any brood, or in other words, is it necessary in order to establish a colony, no matter what quantity of bees, that brood should be given them to induce them to stay? How many bees would it require to establish a colony, that would give a surplus, if the colony were put in the hives as above on May 1st?

H. Z. SHRIVER.

Cranberry, W. Va., Oct. 8, 1882.

[It is too late now to attempt to build up colonies by buying one-half pound of bees, as is suggested above, and giving them a queen. In the spring it might do. It would be safer to give them a frame of brood to induce them to stay.—ED.]

Packing Bees in Chaff.—On page 645 of the BEE JOURNAL for Oct. 11, the writer of the Prize Essay on Wintering Bees says: "Then remove the cover, and place on top of the quilt a cushion, and about 4 inches of sawdust packing." Are we to understand that the sawdust should be in the cushion, the cover also to remain off, and the narrow strips to be placed on the cushion?

W. W. MOORE.

Gillett's Grove, Iowa, Oct. 16, 1882.

[Mr. Clouse is invited to reply to these queries.—ED.]

Wants a Society.—To the bee-keepers of Missouri, Arkansas and Kansas—it seems strange that the bee-keepers in the above-named States, remain so inactive concerning a Society or Convention. I should like to become a member of such a society consisting of enterprising men and women who are willing to make some effort, for the advancement of bee-culture, and the establishment of a good home market. I will be pleased to hear from any one interested in the organization of such an essential thing and who is willing to work for it. My bees have done finely this season. About how many bees must there be in a colony that it may be sufficiently strong for winter, and how many frames 11x12, partly filled, would it require to carry them through? I winter on summer stands, use division boards and quilts on top of the frames. My wife and I are giving our time and talent to our bees, and they have rewarded us well. We now have 84 colonies in good condition for winter. We read with much interest the reports of those Conventions.

J. T. BRUTON.

Joplin, Mo., Oct. 12, 1882.

[There should be bees enough to cover 6 frames, and they should have 25 pounds of honey.—ED.]

Caution about Shipping Honey.—Seeing an advertisement in the BEE JOURNAL of a party on 22d street, Chicago, who would purchase honey in large or small quantities; and for comb would pay the highest market price, I concluded to call and try to dispose of mine. Accordingly I went to the place designated, and after some difficulty, found a young man who claimed to be one of the firm, who took me to their place of business, which proved to be a basement room, very poorly lighted and showing no signs of business. He did not want to purchase; had all the stock they required at present, etc. Now I write this to caution bee-keepers from sending their goods to any person, without knowing the standing of the party to whom they ship.

L. H. SCUDDER.

New Boston, Ill., Oct. 20, 1882.

[As the party in question only proposed to *buy* honey for cash, we did not deem it necessary to enquire into their standing. Of course, no one should *trust* any person, with whom they are unacquainted, without first ascertaining their business standing, and being fully assured of their ability to make all contracts good. We have repeatedly cautioned our readers on the necessity of this.—ED.]

THE AMERICAN BEE JOURNAL

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eigh words;** fourteen lines will occupy 1 inch of space Transient Advertisements payable in advance. Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisemen published WEEKLY as follows, if the whole paid in advance :

For **4** weeks..................**10** per cent. discoun
" **8** " ....**20** " "
" **13** " (3 months)....**30** " "
" **26** " (6 months)....**40** " "
" **39** " (9 months)... **50** " "
" **52** " (1 year) ....**60** " "

Discount, for **1** year, in the MONTHLY alone **25** per cent., **6** months, **10** per cent., **3** month **5** per cent., if wholly paid in advance.

Discount, for **1** year, in the SEMI-MONTHLY alone, **40** per cent., **6** months, **20** per cent., **3** months, **10** per cent., if wholly paid in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate fo the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ The Amerian Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

◆

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club :

For a Club of **2,**—"Bees and Honey," in paper.
" " **3,**—an Emerson Binder, or "Bees and Honey," in cloth.
" " **4,**—Apiary Register for 50 Colonies, or Cook's Manual, paper.
" " **5,**—Cook's Manual in cloth, or the Apiary Register for 100 Colonies
" " **6,**—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Two subscribers for the Monthly will count the same as one for the Weekly, when getting up clubs for the above premiums.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly is now permanently established, and will be continued as heretofore.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

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☞ New subscribers for the Weekly BEE JOURNAL for 1883, can obtain all the rest of the numbers for this year by sending $2 to this office.

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☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

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☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

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Kendall's Spavin Cure is used from the Atlantic to the Pacific coast.
40w4t

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., October 21, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 6½c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 16@20c. on arrival; extracted, 7@10c. BEESWAX—Firm at 20@25c. per lb.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand increases with the cool weather, but not sufficiently fast to keep pace with receipts, which now accumulate, as it is time to get the surplus into market. Prices remain unchanged with perhaps a tendency downward, owing to many consignors desiring to realize quickly.

We quote: white comb, in small sections, 18@20c. Fine, well-filled, 1 lb. sections bring the outside price. Dark comb honey, little demand, 15@16c. Light honey, in larger boxes, 12@16c. Extracted—white clover, 9½@10c.; dark, 8@9c., in barrels and half-barrels. Kegs will bring but a small advance, if any, above half-barrels.

BEESWAX—Very scarce. Choice Yellow, 30c.; dark to fair, 20@24c.

R. A. BURNETT, 165 South Water St.

CLEVELAND.

HONEY—In steady but moderate demand at 21@22c. per pound, for best white one pound sections, in attractive packages. Same quality in less attractive shape, 20@21c. In 2 lb. sections, 19@20c. Second grade sells about 2 cents per lb. less than the above prices. Buckwheat is unsalable in our market. Extracted, in small tin pails, 15c.; in 20 to 60 lb. cans, 14c.; in barrels, dull at 10@12p.

BEESWAX—Prime quality, 25@28c.

A. C. KENDEL, 115 Ontario Street.

SAN FRANCISCO.

HONEY—Extra choice, either comb or extracted, is inquired for, and extreme figures are offered.—Nearly all offered is second or third quality, for which the demand is not active at the prices demanded.

We quote white comb, 18@20c.; dark to good, 12@15c. Extracted, choice to extra white, 9½@10½c.; dark and candied, 7½@8½c.

BEESWAX—28@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Prices unchanged and dull. Comb 15@18c—latter for choice white clover in small packages; strained in round lots at 6@7c.; extracted in cans at 9@10c.

BEESWAX—Sold fairly at 26@27c. for prime.

R. C. GREER & CO., 117 N. Main Street.

NEW YORK.

HONEY—Demand slow. We quote: Comb in the small sections, white, 16@20c. Extracted, 7@10c.

BEESWAX—The stock continues light, and prime Southern held up to 30c., with little if any obtainable below 29c. Western, pure, 29@30c; Southern, pure, 30@33c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Sells very readily in 1 lb. sections at 22@25c. for best white, and 20@22c. for 1½ to 2 lb. Boxes containing ½ pound, 30 c. per pound. Extracted is selling very slowly at 12@14c.

BEESWAX—25@26c.

CROCKER & BLAKE, 57 Chatham Street.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies	(120 pages)	$1 00
" 100 colonies	(220 pages)	1 50
" 200 colonies	(420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

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Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

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☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

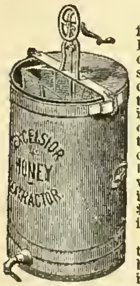
WANTED.—The numbers of the BEE JOURNAL, from January 1 to Sept. 30, 1882. State price to JAS. P. BURDICK, Glen Falls, N. Y.

AT LULING, TEXAS.

I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.
14w39t J. S. TADLOCK.

EXCELSIOR

HONEY EXTRACTORS.



In answer to frequent inquiries for Extractors carrying 3 and 4 Langstroth frames, I have concluded to adopt these two new sizes. The 3 frame basket is in a can of the same size and style as the 2 frame. The 4 frame basket is in the larger can, with the cone or metal standard for the basket to revolve upon, leaving room underneath the basket for 75 or 80 lbs. of honey. It will be complete, with covers, and in every way identical, except in size, with the $16.00 Extractor, 13x20, which is intended for any size of frame.

Excepting with the $8.00 Extractors, all the different styles have strainers over the canal leading to the honey gate, and movable sides in the Comb Baskets. The $8.00 and $10.00 Extractors have no covers.

For 2 American frames,	13x13	inches	$8 00
For 2 Langstroth "	10x18	"	8 00
For 3 " "	10x18	"	10 00
For 4 " "	10x18	"	14 00
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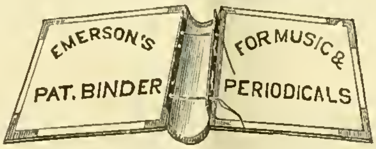

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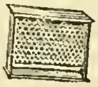

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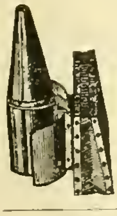

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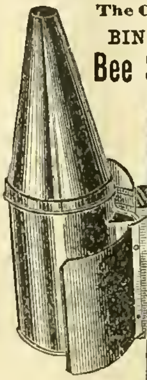

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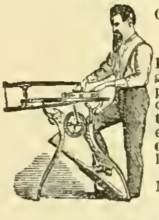

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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.................................. 689
The Langstroth Fund.............................. 689
Preparing Bees for Winter........................ 689
Sowing Alsike Clover............................. 689
The Purity of Honey.............................. 690
Crop Report in Los Angeles Co., Cal.............. 691

Among Our Exchanges—

Seasonable Hints................................. 691
Making Tin Cans Tight............................ 692
Best Size for a Colony in Winter................. 692
The Northwestern Convention...................... 692
Crop Reports for 1882............................ 693
  Georgia.. 693
  Iowa... 693
  California..................................... 693
  Connecticut.................................... 693
  Missouri....................................... 694
  Dakota... 695
  Maine.. 695
  Wisconsin...................................... 695

Correspondence—

Bee and Honey Report for 1882.................... 696
Bees and Honey Shows at Fairs.................... 696
Spring Management of Bees........................ 697
Purity of the Atmosphere......................... 697
Gleanings from Germany........................... 698

Convention Notes—

Local Convention Directory....................... 698
Convention Notices............................... 698

Selections from Our Letter Box—

Winter Depository................................ 699
A Good Report from Canada........................ 699
Iowa Honey Crop for 1882......................... 699
Wintering Bees in Clamps......................... 699
Well Satisfied................................... 699
His First Report................................. 699
Late Breeding of Queens.......................... 699
Botanical.. 699
How to Keep Honey................................ 699
Two-Story Hives for Winter....................... 699
Good Honey Crop in New York...................... 699
Best Crop ever had in Illinois................... 699
Almost a Failure................................. 699

Sowing Alsike Clover.—A correspondent asks for information on this subject. When planted alone sow in the spring from 3 to 4 pounds to the acre. When mixed with white or red clover, sow about 2 lbs. to the acre. Timothy or red clover will do no harm, as they may be cut early enough, so that the Alsike will be the only plant ripe enough to furnish seed. Moist land is best for it. It should not be sown with grain. Some advocate its being sown in drills, in order to keep the weeds down.

Mr. Baldridge, who has had considerable experience with Alsike as a honey plant, says:

> It is much the better way to mix Alsike with timothy, or the common red clover, or both. When thus mixed they are a help to each other. The Alsike being a native of a cold climate, does not winter-kill, and besides, it acts as a mulch in winter and spring to the common red, and keeps the latter from being destroyed by the heaving-out process. As the red clover shades the roots of the Alsike, which grow close to the surface, it protects the latter from the effects of drouth.
>
> The timothy and red clover being both upright growers, lift and keep up the Alsike from the ground, which is very desirable. The stem of the Alsike is too fine to support its many branches in an upright position, and hence is more inclined to lodge than the common red.
>
> For the reasons given, the combination of the three named plants is very important, and will prove successful wherever tried.

◆

☞ The Vice President for Conn., Mr. Jeffrey, reports 80,000 colonies of bees in that State, and then adds that 95 per cent. of them are in box hives! Talk about progressive bee-keepers!

Preparing Bees for Winter.—Quite a number of queries have been propounded, besides those answered in this issue of the BEE JOURNAL, on this very important subject. In order to answer them all, without repeating, we shall, in the next issue, give some very full instructions on the subject, including Mr. D. A. Jones' plan for preparing bees for winter by five different methods. He says:

> I have tried all the different methods; spent thousands of dollars in experimenting, and have no hesitation in saying I have had a larger and more varied experience than any other bee-keeper. I have succeeded for years in wintering by the system which I have adopted, and hundreds of others have been successful who have carefully followed the same instructions and directions.

◆

☞ On page 676, tenth line from the top of the last column, for 400 pounds to the colony, read 100 pounds. Here, at least, one figure makes a vast difference. Thanks to Mr. Scudder for calling our attention to it.

◆

The Langstroth Fund.—The money raised at Cincinnati, O., and forwarded to Mr. Langstroth, was as follows, as far as we can determine:

> E. Parmly, 19 W. 38th St., N. Y., $50; D. A. Jones, Beeton, Ont., Can., $20.00 ($10.00 cash and a queen that afterwards sold for $10); A. J. Cook, Lansing, Mich., and A. I. Root, Medina, Ohio, $10 each; Dr. C. C. Miller, Marengo, Ill., $5.00; Dr. Blanton, Greenville, Miss., $2.00. The following persons contributed $1.00 each; E. B. Vincent, Sunman, Ind.; J. M. Hyne, Stewartsville, Ind.; Christopher Grimm, Jefferson, Wis.; B. Price, Iowa City, Iowa; Rev. L. Johnson, Walton, Ky.; H. B. Harrington, Medina, O.; four "friends," each; Herrick; E. Peleman; E. G. Lewis, Ben Mullen, T. B. Hunt, and a friend, 50 cents each. Two "friends," 25 cents each. Total, $112.50. We have given full addresses where they were given to us.—*Gleanings.*

The Purity of Honey.

Mr. J. O. Todd, Richmond, Iowa, writes us as follows:

I wish you would inform us, through the BEE JOURNAL, what constitutes pure honey. I have a large crop of honey this year, and some of the incredulous have said it must be adulterated. I know it is not; and when I have good authority as to the ingredients of pure honey, I wish to have mine analyzed and prove to the unbelievers that a large crop of honey is but the honest reward of the modern system of bee-keeping.

Honey is a substance so well known that it would seem almost a waste of space to describe it; and yet there are many things about its composition that are so varied by locality and the bloom from which it is obtained, which are generally unknown, that it may be well to answer the above question rather in detail.

Honey is solely a vegetable product, not made, but gathered from the nectar of flowers, where it is secreted in fine weather according to the rules of Nature's laboratory. Each flower yields honey of its own peculiar flavor, which, if not gathered, is soon evaporated and lost.

Honey, fresh from the comb, is clear, translucent, slightly amber-colored, and viscous, becoming granular in time, with whitish, transparent crystals. In taste and smell, it is sweet, agreeable and aromatic. It should not irritate the throat when eaten, and its peculiar flavor should be so decided, that it can be readily detected when mixed with other articles of diet.

Honey derived from the blossoms of cruciferous plants, granulates or crystallizes speedily—often, indeed, while yet in the comb, before removal from the hive; while that from labiate plants, and from fruit trees in general, maintains its original condition unchanged for several months, after being extracted from the comb. Honey produced in northern climates likewise crystallizes sooner than that from southern countries.

"Under the microscope," says the *Druggists' Advertiser*, "the solid part of honey is seen to consist of myriads of regularly-formed crystals; these crystals are for the most part exceedingly thin and transparent, and very brittle, so that many of them are broken and imperfect; but when entire, they consist of six-sided prisms, apparently identical in form with those of cane sugar. It is probable, however, that these represent the crystals of dextrose, as they occur in honeys from which cane sugar is nearly or wholly absent. Intermingled with the crystals may also be seen pollen granules of different forms, sizes and structure, often in such perfect condition that they may be referred to the particular plant from which the juices have been gathered."

The Rev. L. L. Langstroth remarks that "honey and sugar contain, by weight, about eight pounds of oxygen to one of carbon and hydrogen."

The chemical properties of honey are as varied as the sources from which it is obtained; and therefore it would be difficult to give any universal rule to prove the query propounded by our correspondent, viz.: "What constitutes pure honey?"

Prof. Kedzie, of the Michigan Agricultural College, has written an article on this subject which we will append, as it is very pertinent to the subject. It is as follows:

Honey is one of the oldest things under the sun. At one time it was probably the only form of sugar known, and to-day is one of our most delicious articles of food. Does it not seem strange, then, that in this scientific age so little is known of its real composition or the changes it undergoes? Honey is composed of grape and sugar cane, together with water, acid and waxy matters. If honey be burned completely, a grayish colored ash remains, which amounts to about fifteen per cent. of the original honey. In this ash I succeeded in obtaining reactions for silica, lime and iron. There is also a small quantity of potash and phosphoric acid in honey. To estimate the quantity of these present I took two portions of "cap" honey, free from pollen and wax, and burned them to a coal-like mass. In one I extracted the potash with muriatic acid, and in the other, phosphoric acid with nitric acid, and estimated them in the usual manner.

The following are the amounts obtained: Potash .06 per cent.; phosphoric acid .08 per cent. These substances would naturally be present in honey, as they are found in soils, and circulate in the juices of plants. There are many things connected with honey about which, at the present time, but little is known. The following are a few:

1. Has honey a definite composition? Is there any difference between the relative amount of sugar in honey made from buckwheat, basswood, clover, goldenrod, brown sugar, etc., or between the relative amounts of cane and grape sugar? Probably this question can be answered only by comparing the analysis of different kinds of honey.

2. Does the bee add anything to nectar in changing it into honey? On this point there is wide difference of opinion. But I know of no experiments having been tried to settle the matter. Perfectly pure honey, that has been dried completely, contains about one per cent. of nitrogen. Does the bee supply this nitrogenous matter? To decide this I gathered some nectar from flowers in the Agricultural College green-house (from the azalia, rhododendron, and fuchsia, but principally from the last), and carefully tested it for nitrogen. The result of my experiments is that nectar does contain traces of nitrogen. Therefore, the fact that honey contains nitrogen does not prove that it was furnished by the bee. May not this question be decided by feeding bees upon pure white sugar, which contains no nitrogen, and afterward examine the honey to see if any nitrogenous matter has been added to it?

3. After honey has staid for a certain length of time, a part of the grape sugar crystallizes out, and granulation or candying is the result. The cause of this change is not known. May not the conditions under which granulation occurs be obtained by a series of experiments, by keeping honey at different temperatures, etc.? Answers to these questions may not advance the market a particle, but we shall enjoy the satisfaction of knowing the truth of the whole matter.

* * *

☞ In the BEE JOURNAL, page 662, at the bottom of the second column, Mr. J. M. Hicks was made to say he "had averaged 500 lbs. of honey per colony, from alsike clover," in the report of the National Convention. It should have read that "Mr. Hicks said that alsike clover, in a good season, would yield 500 lbs. of honey per acre." In writing us of this error, Mr. Hicks adds: "I obtained 718 lbs. of extracted honey from one colony of Holy Land bees." So that he has even surpassed the amount, in one instance at least, stated in the paragraph on page 662. Mr. Hicks adds: "Bees have done splendidly here during the latter part of August and all of September."

* * *

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

* * *

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

Crop Report in Los Angeles Co., Cal.

We see that Mr. W. W. Bliss, in the *California Apiculturist*, for October, speaking of the report sent to the North American Bee-Keepers' Society, as published on page 693 of this issue, says:

> I advertised through the *Apiculturist* for the names and addresses of all who kept bees in Los Angeles county. From that advertisement I received not one name from any one who is now keeping bees.
>
> Mr. Gallup, of Santa Ana, was the only one who seemed to take any interest in the matter. He sent me the names, addresses, and number of colonies of 36 bee-keepers.
>
> These, with the names I had, comprised a list of 65, to whom I sent blanks to be filled out and returned, and up to date I have received but 18.
>
> Since the report was sent, I have received the following: 614 colonies of bees, 8,000 lbs. of comb honey, and 64,000 lbs. of extracted honey.
>
> Mr. Gallup's report and the one above included, makes 4,864 colonies of bees in the county, that I could get any account of.
>
> Now, I for one am ashamed to send in such a report as this, but it is the best that I could do. Some of the bee-keepers were very careless in filling out the blanks after they were sent to them. Some did not state whether the bees were Italian, hybrid, or black, and in those cases I put them down as the latter. Others sent reports of those out of the county, etc. Kind friends, do not think I am saying this to find fault, only to show you your mistakes, that you may do better next time.
>
> I wish to make a suggestion, i. e., that every bee-keeper keep a correct record of everything taken from their respective apiaries, that brings in the cash, and let us see if we cannot present a better report for the year 1883.

Some will remember that last year we called for crop reports for the whole country and obtained statistics of only 520 colonies for California. Thereupon, a writer in the "Semi-Tropic California" roundly abused us for such a report, when the assessor of Los Angeles county alone had found some 17,000 colonies there. Time cures everything; the above from the "California Apiculturist" completely vindicates our report of last year. If the bee-keepers there do not take the trouble to report, they cannot expect to be correctly represented. Mr. Bliss gives some good advice to them, which we hope will be heeded.

Mr. Wm. Muth-Rasmussen, of Independence, Cal., also writes as follows, in that paper:

> I have through the "Apiculturist," as well as by private correspondence, solicited reports for the National Convention, from the bee-keepers of this State, and particularly from the secretaries of the various county associations, and have supplied many with blank forms to be filled out, and returned to me by the 15th of this month. After waiting for seven days over the appointed time, I closed my report, in order that it may reach the President in time for the Convention.
>
> I have but a poor showing to make for this State. Many, to whom I sent blanks, have not responded, and others were unable to obtain statistics. As I could not answer each one individually, allow me hereby to thank those who have sent me their reports. To them, who have not responded, I can only say that they stand in their own light. We all know, that it has been a poor honey season, but that is no reason why not at least the number of colonies of bees should be given, from which an estimate might be formed of the extent of the industry, and the amount of honey and wax the State is capable of producing in an ordinary good season.
>
> I am disappointed at the lack of interest shown in this matter. California ought to stand as the banner-State for bee-culture, even if it has it occasional failures, and I doubt not that her number of bee-keepers and colonies of bees would far eclipse any other State in the Union if the bee-men would take pride enough in their vocation to make a report of what they have, and what they can do, when Providence favors them.
>
> We need more light. We must keep up with the times, or else take a back seat. No bee-keeper can afford to be without one or more bee papers, through which he is posted on the fluctuation in the price of his products. Improved bee-culture, although of recent date, has already reached such a point, that only he who keeps abreast of the leaders can make a success of it. The old fogies, who are hanging on behind, will soon miss their hold and drop off, to be replaced with a more intelligent class.

Thereupon the editor remarks as follows:

> The report of Mr. Muth-Rasmussen, California's Vice President of the National Bee-Keepers' Society, certainly does California a great injustice. This is, however, no fault of Mr. M., as will be seen from his explanation in another column. Mr. M. discharged his duty faithfully. Notices from him to some of the secretaries of associations in other counties, passed through our hands and were promptly forwarded. Owing to the failure of the season, but little interest has been taken by apiarists, who do not feel like reporting blasted hopes. The amount is probably not more than about one-fourth as much as should have been reported. It is hoped that apiarists will see the importance of making a correct report hereafter, as it will enable the producers to determine the best time for marketing their honey and the price to be realized for the same, and buyers will know better what they can afford to pay. Those who have been actively engaged in collecting the honey statistics of the State, we trust will be afforded greater facilities and a more general interest taken in the work when more reliable information will be obtained.

☞ We have received Mr. D. A. Jones' new Circular and Price List of Bees and Apiarian Supplies. In this pamphlet of 24 pages may be found Mr. Jones' ideas upon Wintering Bees in Bee Houses, cellars, clamps, chaff and in dry goods boxes, packed. It is beautifully illustrated, and makes a handsome appearance. Mr. Jones is one of the most extensive bee-keepers in America, and has had much experience with bees.

AMONG OUR EXCHANGES.

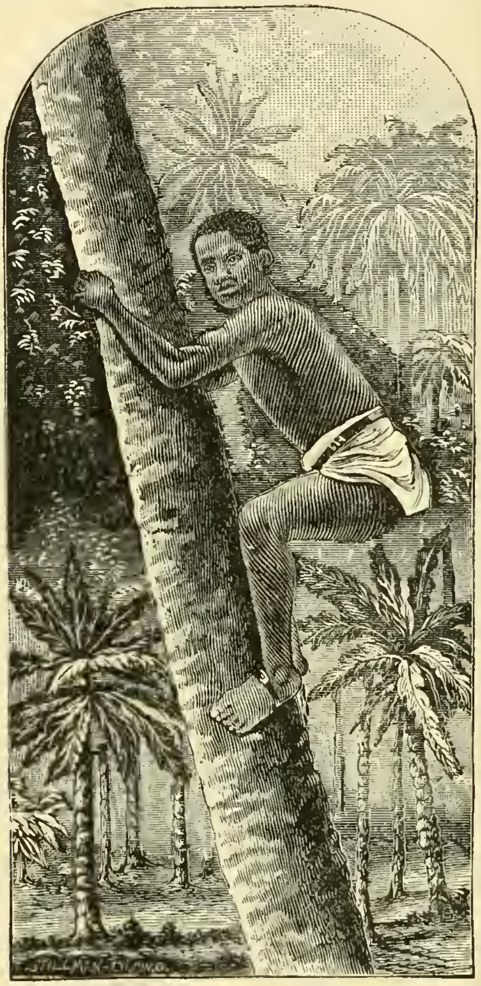
MISCELLANEOUS.

Seasonable Hints. — The *American Agriculturist* for November, contains the following:

> A subscriber asks if sugar can be safely fed to bees in winter. There is no other food so good for bees as pure sugar. The granulated form is best. All bee-keepers that have fed this sugar for winter stores are agreed that it is even superior to honey for bees. This is owing, doubtless, to its composition, as it contains more cane sugar, and also to the absence of pollen, which is to be found in all honey. While pollen generally does no harm to bees in winter, it is not good in some cases and may be the cause of fatal dysentery. Dissolve the sugar for feeding in an equal bulk of water, and heat until it boils, and when cold it is ready to feed.
>
> It will be remembered that many bees were lost during the winter of 1880-81, from neglect. They were caught by the exceptionally early season. They need at least 30 pounds of good food per hive, and they should be crowded upon just enough frames to contain them, by using division boards. If the bees are to be packed, this should be done as early as Oct. 1st, and if chaff hives are used, the packing above and at the ends of the frames should be added at the same time. It is always best to have the fine chaff or sawdust in sacks. However we winter, whether in chaff hives, or in the common hives with chaff packing, or in cellars, it will always pay to pack above and at the sides of the frames. The hives should be put into the cellar as early as November 1st, before the severe weather sets in. The hives should be dry when set in, and, in the removal, disturb the bees as little as possible. When in the cellar, remove the tops of the hives, but not the chaff pillow. The entrance should be left open.

An East Indian climbing a Tree in search of Apis Dorsata.

Some time ago we published an engraving, showing the home of Mr. Frank Benton, in the island of Cyprus, which he has since left to go to Suk-el-Gharb, Mount Lebanon, in Palestine, Asia. Now we present an engraving of a native East Indian (Cingalese) climbing a tree, in search of the "giant bees," found only in the island of Java—the *Apis dorsata.* Our readers will remember the many articles published a year ago in the Bee Journal, concerning Mr. Benton's journeys in the far East in search of these giant bees, and of his sad failure to procure any of them. The engraving on this page is from a drawing which he sent to Mr. Root then, and explained in the last *Juvenile Gleanings.*



Making Tin Cans Tight.—Mr. J. M. Brooks, Columbus, Indiana, writes to *Gleanings in Bee-Culture* on the above subject, and gives his experience as follows:

Being a tinner by trade, I will give you the plan we used to test our fruit-cans with at the shop. Get a thick piece of harness leather, a little larger square than the mouth of your cans. Next place a lighted lamp or candle in front of you, and a cup of alcohol at your left. Now with a bit of sponge touch the alcohol, then the candle; drop it burning into the can, and place the leather (previously softened with water) over the mouth of the can, and hold it down to exclude air. The burning alcohol destroys the air in the can, forming a strong vacuum. After two or three seconds (not longer), if in pulling off the leather it comes off with a crack, or report, the can is tight; while those from which the leather comes off easily, without resistance or report, are faulty. Such can be quickly tested, and the leaks found, by applying your mouth to the seams, and trying to suck air through them. I think, after giving this plan a trial, and "kind o' get the hang on't," that you will like it, as being the quickest, neatest and cleanest.

Best Size for a Colony in Winter.—The *Country Gentleman* gives the following on this subject:

Considerable controversy has taken place with regard to the best size for a colony when put into winter quarters. In my estimation, six Langstroth frames, well covered with bees, answer as well as eight or ten, particularly if in a chaff hive; they will be found as strong in the spring usually as the larger ones. I would myself prefer four or five frames crowded with bees, with a young laying queen, to twice as many with a two-year old queen—the results on the first of April next year would be much more satisfactory. On the final examination, before putting the bees away for winter, I prefer to take away, if necessary, some frames of their fall-gathered honey and pollen, and introduce into the middle of the hive two frames of empty worker comb; then feed the bees liberally pure sugar syrup (made of coffee A sugar and water), until those frames are filled and sealed over.

The bees will come out cleaner, brighter and more healthy in spring on sugar syrup than on any fall honey they may gather. The frames removed should be kept in a warm, dry room until spring. and then be fed back to them for brood-rearing, after the bees are able to fly and void their feces. Pollen consumed in winter is now acknowledged to be the main cause of dysentery, and by removing the frames filled or partially filled with pollen, and substituting pure sugar syrup, the bees can live for months without any necessity of leaving their hives, and come out in spring clean, bright and healthy.

The Northwestern Convention.—Mrs. L. Harrison, in the *Prairie Farmer*, remarks thus on the late bee-meeting in Chicago:

The third annual reunion of the Northwestern Bee-Keepers' Society, held in Chicago, Oct. 18 and 19th, has just closed. This society convenes yearly, during the last week of the Inter-State Exposition, so that cheap fares are obtainable on the roads leading hither. At its initial meeting three years ago, it was a tiny plant, but under the fostering care of Thomas G. Newman, Esq., it now spreads its wings over seven states of the great Northwest. Over one hundred able representatives from these states were in attendance at the recent meeting. It is to be regretted that there are not more farmers and bee-keepers in a small way, to partake of the rich repast that is spread at these reunions. .... The whole ground of bee-culture was plowed, sub-soiled, harrowed and afterwards brushed in with clippings of the hedge, by intelligent and practical apiarists during the sessions of the society. The deliberations of this society show that bee-keeping is no mean pursuit, and by its culture the Northwest may rival, if not surpass, the sunny South in the production of sweets.

Crop Reports for 1882.

The following crop reports of both bees and honey, were sent to the North American Bee-Keepers' Society, and read at its late meeting in Cincinnati, O. They were kindly sent to us by the Secretary, Mr. Root, and will appear simultaneously in the Bee Journal and *Gleanings in Bee Culture* to-day. These reports are quite full and interesting and cover eight States. The first is from

GEORGIA.

From an extensive correspondence with all parts of the State, I place the honey crop, the present season, at an average of about 26 lbs. to the colony. In some sections it has been unusually fine, while in others no surplus has been taken. The greatest yield reported from a single colony was 350 lbs. extracted honey.

The most of my correspondents reported the greatest yield when the atmosphere was moderately dry, while a few reported the largest flow when the atmosphere was "decidedly humid." Summing up these reports, we find that an atmosphere neither dry nor wet, but moderately cool and moist, is the most favorable for a flow of honey.

Our honey is mostly of a dark amber color, though the flavor is good. This year the quality was above an average.

Geographically considered, Georgia possesses a greater variety of climate and soil than any other State in the Union, and consequently a greater variety of forage. Cultivated forage plants, including clover and buckwheat, grow well in the northern parts of the State; while in most of the middle region and southern part, the honey sources are confined to the native flora of the forests and fields.

The majority of bees are kept in the old box hive, or gum; but movable-frame hives are being rapidly introduced, as well as the improved races of bees. J. P. H. Brown.

Augusta, Ga.

IOWA.

About a month ago I issued a call through some of the bee papers, asking individual bee-keepers in the State to send me reports as to the status of our industry in their several sections. In response, I have received twenty reports from seventeen different counties—about one-sixth of the whole number of counties in the State. Of course, I cannot make an accurate report from such meager materials.

In my own section of the State, the northeastern, bees went into winter quarters last fall in excellent condition. The winter was short, open, and mild, and, as a general thing, the 1st of April found bees nearly all alive and in excellent condition, no matter by what mode wintered. From that time until the middle of summer, we find the worst kind of weather for bees, it being cold, windy, and cloudy nearly all the time, preventing bees from gathering much pollen or honey, or rearing much brood. As a consequence they were in poorer condition on the first of June than on the 1st of April, with quite a large number of colonies entirely dead, some reports estimate the loss during these two months at 25 per cent. I do not think, however, that the loss over the entire State will average so large as that, although it was very serious. It would have been much larger but for feeding having been very generally resorted to.

White clover was nearly two weeks later in commencing to bloom than ordinary, but yielded honey from the first: that is, whenever the weather allowed bees to gather it, which was but little more than one day in four, until the middle of July, when we had about twelve days of good weather, and as heavy a flow of honey from both white clover and basswood as I ever saw. Bad weather caused another interval of several days, followed by a heavy run for two weeks from buckwheat, and a light run the rest of the season.

I judge that the season over the State at large has been very similar to what we have had in our section, except that the central and southern parts of the State had less bad weather to contend with, and consequently a steadier flow and much larger crop of honey; in fact, the largest crop gathered for years. Of course, it is impossible to estimate the average yield per colony over the State, but I am satisfied that those who practice improved bee-culture have obtainad not less than 75 lbs. per colony. The slow but steady yield of honey during the earlier part of the season caused a larger amount of brood-rearing than common, which resulted in excessive swarming. Nearly all the reports speak of this fact.

The reports quite generally indicate an increasing interest in our modern methods of bee-keeping, also that bees are in excellent condition for winter.

All things considered, the season of 1882 has been a prosperous one to a large majority of bee-keepers in Iowa. Those in the northern part of the State have had a full average season, while those in the other parts have had a much more than average yield. As the flow of beer and whisky has this year lessened in our State, that of honey has largely increased.

O. O. Poppleton.

Williamstown, Iowa.

CALIFORNIA.

I hereby send you my report for this State, as far as I have been able to make it out.

In Los Angeles county 39 bee-keepers report 4,220 colonies, but say nothing about honey.

In Ventura county, 160 apiarists, with 7,500 colonies of bees, report 220,000 lbs. of extracted honey, and 2,000 lbs. of wax.

In Kern county 3 apiaries, report 400 colonies, but no honey.

In Alameda county, 1,500 colonies are reported with a crop of 75,000 lbs.

In Inyo county 46 bee-keepers, with 865 colonies, report 23,450 lbs. of comb honey, 6,000 lbs. of extracted, and 2,750 lbs. of strained, and 100 lbs. of wax.

In Napa county 6 bee-keepers reported 50 colonies of Italians, 50 hybrids and 150 blacks; 100 lbs. of wax, and 350 lbs. of comb honey, 2,000 lbs. of extracted and 3,350 lbs. of strained.

Owing to unfavorable atmospheric conditions in the spring, and in some localities to a total lack of rain during last winter, the flowers throughout the State have failed to yield an average amount of honey this year. In the southern counties, which is the principal honey-producing part of the State, the season is regarded as nearly a complete failure, but few bee-keepers securing part of a crop. Mr. E. Gallup writes me that the amount of honey is all guesswork. Others positively refuse to give any estimate of the honey crop. Owing to the failure, many bee-keepers are discouraged, and seem to take no interest in the matter; wherefore I find it difficult to make out any report, which will be at all satisfactory. Several bee-keeping counties have not yet been heard from. Some place the average of honey per colony at 25 lbs. others at 40 lbs. It is impossible to form any correct idea of the true amount. But few give the quantity of wax produced; it will probably all be made into foundation. Much of the honey reported as "comb" is produced in large boxes or even whole upper stories, without any idea or means of placing it on the market in a salable shape. Foul brood is reported very prevalent in some parts of the State, but I have no statistics in that regard. In this, Inyo county, there is no trace of it, as far as I have been able to ascertain.

W. Muth-Rasmussen.

Independence, Cal.

CONNECTICUT.

The fall forage for 1881 was not quite up to that of 1880. A great many colonies went into winter-quarters with light stores, though strong in bees. The latter part of September was very pleasant. The month of October, bees flew about half the time. During November, bees were very quiet, unless in sheltered places, until the 29th and 30th, when they flew almost as in summer, to be again shut in until December 20. Those in sheltered localities flew enough to keep them healthy, when there was another general shut-in until March 2d, when there was a general fly, and again on the 5th, but not so strong. On the 23d there was a good flying-out, and no more generally good weather till the last week in May, though in extra sheltered places bees came out a little.

Apple bloom was only patchy, and more the exception than the rule. Raspberries were fair, and worked on considerably.

In the northwest part of the State I found a variety of willow that is new to me (the spikes are a canary yellow, about 2 inches long, sometimes longer) that holds its bloom from two to three weeks. The wood is very brittle.

The flowers possess only stamens; the cup of the flower contains a drop of honey, as large as a medium-size pin-head, light amber color the consistency of basswood, and of good flavor. I consider it as good as goldenrod, if not better. The bees work steadily on it, and are very good natured, even hybrids being quite docile. One good colony of bees having 7 combs were given three more empty combs, and they filled and capped them in one week. The same colony boxed about 20 lbs. besides, of clear willow honey. It was the only colony tried, but all the others in the same locality did equally well, considering their chance. I have been through over one-half of the State, and I never saw but few of the same kind of willows, and then but solitary bushes always covered with bees.

White clover showed itself in favorable patches June 7, and was in general bloom by the 15th; but the general lightness of the colonies, caused by the late spring, made but little surplus honey from white clover.

Basswood was a medium bloom in a few places, though the majority of the trees did not show a single flower.

Sumac bloomed uncommonly heavy, and the flowers were dripping with honey, but of short duration, caused by the drought.

Buckwheat was a failure, as a rule, though exceptional pieces on wet land yielded honey abundantly.

The early fall forage plants being dried up, there has been but little honey gathered since sumac; but the past three weeks of showers have made vegetation again look green, which, with some warm weather, may give us an ample late supply for winter. Brood in the hives is a scarcity, and colonies are generally quite weak.

At the New Milford Agricultural Fair, Sept. 30, through the untiring efforts of Mr. Wm. L. Burgess, of West Morris, Conn., the nucleus of a State bee-keepers' society was formed, with Mr. Burgess the elected President. He is very enthusiastic and energetic in the cause.

If I remember rightly, at the last annual meeting of North American Bee-Keepers' Society, a resolution was passed to make the Presidents of the State societies the vice-presidents of the National Society; therefore, before I vacate to my worthy successor, I would offer as a resolution, that the National Society request all the editors of the several bee papers to send a list of their subscribers to the vice-presidents of the different States, thereby placing the vice-president in possession of a means of obtaining a general and more correct knowledge of the exact apiarian condition of his State, making his report more valuable and informative.

As nearly as I have been able to ascertain, Connecticut contains about 80,000 colonies of bees, of which 95 per cent. are still kept in box hives, half-barrels, nail-kegs, and the like patent devices of the fogy style.

Of the number of colonies heard of, not over two-thirds will have a supply of stores sufficient for wintering.

Woodbury, Ct. H. L. JEFFREY.

MISSOURI.

There are but few bee-keepers' conventions in this State, consequently I am unable to give definite and certain statistical information of the productions of honey for 1882.

I know that there has been a great increase in the number engaged in the industry in Missouri in the past two years. There is more honey in the market in the cities and country towns this fall than ever was offered before. It is in better condition and of a better quality; most of the honey offered for sale is in one and two lb. prize boxes.

The "St. Joseph Inter-State Exposition" for the last two years has offered very liberal premiums in the Apiarian Department, and the premium list was a varied one, covering every branch of the apiarian business.

The past season the display in this department was limited, but very creditable. It was the center of attraction, especially to the farmer. They learned the "new way," and where improved apiarian supplies can be bought. The consumer, groceryman, and producer, who were in attendance here, for the first time saw taste, order, and neatness displayed in the productions of the apiary, and preparing honey for the market; also an order and system in the handling and management of bees.

People were in attendance on the Exposition in the fall of 1881 from all the counties in Northwest Missouri. They returned home with new ideas on "bee and honey culture." Quite a number of the country papers made special mention of the display in the Apiarian Department.

Hon. Thomas G. Newman, editor of the AMERICAN BEE JOURNAL, attended the Exposition in September, 1881, and delivered an interesting lecture on "Bees and Honey" one evening, to a large and appreciative audience. The daily papers reported his instructive lecture in full, and in addition made very favorable comments. I feel safe in saying that seven-tenths of the people of Missouri have read more or less on this subject and the profits of the apiary, since the fall of 1881. The circulation of the bee papers has increased in the meantime.

The display in the Apiarian Department of the St. Joseph Inter-State Exposition this fall was the largest and best ever seen at a State or county fair or Exposition in the United States. There were over 3,000 lbs. of comb and extracted honey on exhibition; also Cyprian, Albino, Italian and black bees, and almost every tool and implement used in the apiary.

The increased number of exhibitors and the increased quantity and quality of honey on exhibition this year, warrants me in saying that the interest awakened in this industry in the last two years has been greater than the most enthusiastic could have expected. Most of the county fairs made an Apiarian Department for the first time.

From the above statements you will see that Missouri is on the right road to take a prominent position in this industry. In 1870, according to the census of the general government, she ranked fifth in the production of honey. I have been unable to procure the reports for 1880. I predict that in 1890 Missouri will rank first in the production of honey. Nature has smiled upon this territory; she has made the groundwork for a land which will flow with "milk and honey." On account of its diversified climate, soil, foliage, wild and cultivated flowers, etc., and its abundant and never-failing streams of water, some portion of the State will have an abundant crop of honey each year.

The honey on exhibition this year at our various fairs was white-clover, basswood, buckwheat, honey-locust, goldenrod, etc. Quite a quantity of honey on exhibition this fall was flavored with heliotrope and mignonette. It was of such a superior flavor to any produced in this State heretofore, that bee-masters hereafter will ornament their yards and gardens with these beautiful and useful plants, for the purpose of giving the bees something to flavor honey with.

I deemed it useless to attempt to organize bee associations this year. Until you practically demonstrate to the producer, as a general rule, the practicability of our enterprise, and that there is not only pleasure but also profit in it, you have an up-hill undertaking to encounter. I concluded that the best plan was to have the various county fair associations make an apiarian department, and offer liberal premiums; then to furnish the local papers with articles or ideas on the subject, to be prepared and published. By this means, every farmer in the several counties is prepared to learn something when he visits that department at the several fairs, and converses with those engaged in the industry, who are in attendance. The producer in each county can see the improved bee-hives, and apiarian tools and implements, and he learns the improved manner of preparing honey for market. Furnish the idea and evidence of the results, and let him draw his own conclusion, and he will go home with the consciousness that he knows more than the professional bee-master, and with the resolution that he will furnish evidence of that conclusion next season. The most conclusive idea to present is, that in an ordinary season each farmer can pay his State and county taxes from the profits of a few colonies of bees, and have something left for spending money for the "old woman and the girls." I would suggest that you, by resolution, indicate the best plan for vice-presidents to adopt in their respective States to further the work.

From my experience and observation, I would suggest that each vice-president give his special attention to the local fair in his county; make the apiarian department attractive and instructive. If it is a success, the papers will mention it with favor. Other papers will copy the articles, and advise their readers to do likewise. By this way you furnish ideas, and the evidence that there is profit and pleasure in the industry; and you have one less difficulty (which is the greatest one) to overcome; that is, the idea that you have some patent right to sell. Furnish the idea and evidence generally, and that there is pleasure and profit in the investment, and the producer will, in a short time, buy the improved bees, hives, and apiarian implements, and will be compelled to organize local bee conventions.

If this plan, or some one similar, could be adopted, in five years the honey crop of the United States would be enormous.

In behalf of the friends of "Improved Bee Culture" in Missouri, I must extend thanks to the Hon. Thomas G. Newman, of Chicago, Ill., for the good send-off he gave the honey and bee interest in Missouri, in September, 1881. By his coming here and delivering his lecture on "Bees and Honey," he gave character to the enterprise and stability to the industry.

Those who profited by his lecture and bought a few colonies of bees, were again benefited by a distinguished bee-master from Illinois, Mr. Elvin Armstrong, of Jerseyville. He made one of the neatest displays of comb and extracted honey ever seen in the West. He showed producers how to prepare comb honey for market, and how to put extracted honey in good marketable shape, in glass jars and bottles neatly labeled. These ideas were practical, and are invaluable to our people. He was awarded the $25.00 sweepstake premium for the best display of honey; also $15.00 for the best display of extracted honey. He had his "Crown bee-hive" on exhibition. It was the first time many of our farmers had seen a frame hive with surplus honey. Mr. Armstrong took great pains in explaining to visitors the advantages of frame hives over the old-style "gum." He was awarded the special premium, $10.00, for the best bee-hive.

Missourians engaged in bee culture invite every person engaged in the same industry to come and contest for our liberal premiums offered by fair associations. Bring in ideas, and take the money premiums. Therefore, Mr. President, you see we Missourians are not only just, but we are generous.

St. Joseph, Mo. R. S. MUSSER.

DAKOTA.

Number of colonies in the fall, 267; in spring, 260; lost in spring, 5; colonies sold, 40; number of colonies now, 420; comb honey, 9,381 lbs.; extracted honey, 1,601 lbs.; total honey crop, 10,982 lbs. Eighty per cent. were in movable-frame hives, and twenty per cent. in box hives and log gums. Ten per cent. of increase was obtained by division, and 90 per cent. by natural swarming. The crop, as compared with last year, is one-half.

The above report is compiled from tabulated reports received by me from 22 bee-keepers—about one-half the number that are in the Territory.

The fore part of the season up to July 10, was very wet and cool; so much so that bees had to be fed, being unable to obtain enough to subsist on; from July 10 to Aug. 15, the honey-flow was good; after the 15th of Aug. the weather was so dry the bees did but little; so on the whole there will be only one-half the honey here this year that we ought to have had.

W. M. VINSON.

Elk Point, Dakota.

MAINE.

COUNTY.	Colonies of Bees in the Fall of 1881.	Colonies died in the winter and spring of 1881-2.	Colonies at the beginning of the season of 1882.	Increase during 1882, by dividing.	Colonies of bees at the close of 1882.	Pounds of Comb Honey produced.	Pounds Extracted Honey produced.
Aroostook..........	2500	1250	1250	1750	3000	20,000	1000
Androscoggin......	1000	400	400	400	800	3,000	1000
Penobscot..........	2000	1250	750	1250	2000	4,000	800
Waldo	1000	300	700	700	1400	12,000	1200
Somerset............	1000	500	500	600	1100	3,000	1000
Franklin.............	1000	300	700	100	800	5,000	500
Oxford...............	1200	500	700	600	1300	5,000	550
Cumberland	500	150	400	400	800		
Sagadahoc	300	50	250	125	375	500	150

Nine of the best counties give over 10,000 colonies at the beginning of winter, 1881, of which more than 30 per cent. died during the winter from starving, freezing, smothering and various other causes too numerous to mention. Nine-tenths were in box hives, and about the same proportion were black bees; the rest were in improved hives of various designs, mostly with movable-frames, of all sizes, from 7x9 to 9x18.

Nearly all the box hives are arranged to receive sections for surplus over the brood-nest. This is especially the case in Aroostook county, where the colonies number nearly 3,000, and produce 20,000 lbs. of box honey at 20 cents per pound. These are all black bees in box hives, and nearly every one wintered in cellars or special receptacles.

In Penobscot and other eastern counties, there are a few Italians; also in Kennebec, which is a good county for bees. Many of the bee-keepers bought quite freely out of the State, thus increasing their stock, and these were nearly all Italians in movable-frame hives.

About one-half of the bees in the State are wintered on their summer stands, with slight protection. There are, so far as I could ascertain, but few chaff hives. Most of those dying which were wintered in cellars or warm rooms, die from spring dwindling, caused, as many think, by the sudden and severe changes of temperature to which they are subjected. The winter of 1881 was a hard one; the spring of 1882 was late, cold, and changeable. Bees came through very weak; many had to be fed, or died before they could gather any honey. Along the northern and northeastern counties, the midsummer harvest was quite good; but along the sea shore and southwest portion of the State the drouth was too severe for any honey. The fall harvest from goldenrod and other fall flowers was excellent, and I think nearly all will have sufficient winter stores. But the rate of increase, which is almost entirely by natural swarming, is low, many bee-keepers not having a single swarm come off; and the amount of surplus honey is ridiculously small—far below our usual average. Maine is not a bad State for bees; what we want is more improved methods in handling them and their products. I think almost the whole country, or the northern part of it at least, needs a universal frame, so that it may be changed easily from hive to hive and man to man the country over; then we must solve the winter problem, so that our bees will all live through and come out in the spring strong and healthy, and then we shall be able to gather up some of the best of all sweet things, which are now wasted on the desert air. J. A. MORTON.

Bethel, Maine.

WISCONSIN.

According to a request of the President. I respectfully submit my meager report from this State. To a notice published in the BEE JOURNAL to the bee-keepers in this State, only a small percentage responded, and sent me an abbreviated report of the result of the season's operations. The reports I received are from 25 bee-keepers living in different parts of the State, with a return of 3,025 colonies they commenced with May 1, 1882. According to said reports, the average yield per colony I find to be 60 lbs. of surplus, or 181,500 lbs. from all. The honey is of most excellent quality.

The increase reported amounts to over 80 per cent. (two-thirds by natural swarming). The weather of the whole season was exceptionally cold, wet, and windy. The fall is favorable, although cold.

We had a profusion of white clover bloom, but only a moderate yield of honey, owing to the unfavorable weather. A great part of the basswood yield was lost by rain on 6 successive days. The fall yield did not amount to any thing; they hardly got enough to keep up brood-rearing.

According to my own, and from the reports I have received, I estimate the crop of this season to be about two-thirds in Wisconsin. There are in this State about 50,000 colonies of bees; but my report is from only 3,025—a little over one-sixteenth of the whole. If the 3,025 colonies that are reported are a fair average of the whole, then the crop of Wisconsin honey for 1882 amounts to 3,000,000 lbs.; it will bring the net sum of $450,000.

The above figures will show that the industry of bee-keeping is of sufficient magnitude to be supported by the government. C. GRIMM.

Jefferson, Wis,

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

CORRESPONDENCE

For the American Bee Journal.

Bee and Honey Report for 1882.

G. M. DOOLITTLE.

By referring to back numbers of the BEE JOURNAL, the reader will see how my 80 colonies of bees came through the winter in good condition, but, owing to the cold weather the last half of April, they were quite reduced in population, although no colonies were lost. As April 30th was a pleasant day, all had a fine fly, and a little pollen was brought in for the first time. With May 2d it became cold, and snow and frost prevailed till the 12th, when we had a few warm days. Apple blossoms were late, not opening till about June 5th; and owing to cold winds, clouds, and rain, no honey was secured from them except a little on June 8th. Owing to the cold spring, the bees had reared but little brood previous to this, hence, a good supply of honey still remained in the hives to carry them through till white clover.

About the middle of April I sold all my bees, except forty-five colonies on account of the continued sickness of my father, which brought an extra amount of care upon me, so that I feared I could not properly handle a larger number of colonies. Of these 30 were set apart for the production of honey, and the remaining 15 devoted to queen rearing. White clover, although quite abundant, yielded no honey, and July 6 found the honey in my hives all equalized and so reduced that each colony had but little more than enough to last 4 or 5 days. But fortunately the cold weather caused the wild mustard, which is plenty in the fields of grain hereabout, to secrete a little honey, so that July 8th bees obtained a living, and from the 12th to the 20th, a small gain was made in the nearly destitute brood-chamber. July 26 found the basswood open, and as the weather was just right for the secretion of nectar, and my bees, being in readiness for a flow of honey, splendid work was done during the five days yield which followed. Then came two days of closing up, and the shortest season for honey I have ever known was at an end. Although a large acreage of buckwheat was sown, and the bees hummed merrilly over the sea of white blossoms, still not a cell of dark honey was to be seen in the sections. As this is the fifth year buckwheat has failed to produce honey, it is hardly worthy the name of "honey plant," in this locality.

My bees have been increased to 80 colonies in good condition for winter. As a result from the 30 colonies set apart for honey, I have obtained 1,089 lbs. of comb honey and 441 lbs. of extracted, giving a total of 1,530 lbs., or an average yield of 51 lbs. per colony, which is the lightest crop I have received for the past 10 years, except in 1876, when the yield was 50 lbs. I also took about 500 lbs. in nicely sealed frames, but as I have used that to prepare my united nuclei for winter, I shall not bring it into the average yield.

From the 15 colonies set apart for queen rearing, I have sent out 197 queens. My section honey was sold at 17c. per pound and extracted 10c., delivered on board the cars here.

After footing up the total sales from my bees, and deducting all expenses therefrom, except my own work, I find I have $822. As I have the same number that I had one year ago, this gives me the above amount clear, except my work, for one of the poorest seasons known in this State. As a decade of years has now passed since I have kept a close account with my bees, perhaps it may be interesting to your readers to know how such report stands; for it is only by a number of years' experience, in any business, that a true result can be obtained. A report of a very prosperous year, is often misleading, but one extending through a period of 10 years, should approximate very nearly to what might be expected for the same length of time to come. My average yield for each colony in the spring of 1873, was 80 lbs.; 1874, about 100 lbs.; 1875, a little over 106 lbs.; 1876, 50 lbs.; 1877, a fraction of a pound, less than 167 lbs.; 1878, 71 lbs.; 1879, 58 lbs.; 1880, a little less than 62 lbs.; 1881, nearly 135 lbs.; and in 1882, the present year, it was 51 lbs.; making an average yield each year, for the past 10 years, of 88 lbs. per colony, five-sixths of which has been comb honey. The average price at which it has been sold, is about 20c. for comb honey, the highest price 28½c. being obtained in 1874, and the lowest 10¾c. in 1878. Thus the 88 lbs. at 20c. per pound gives $17.60 average cash yield for each colony. Hence, if a man is capable of keeping 50 colonies, his income would be $880 a year; if 100, it would be $1,760. After an experience of 14 years in the bee business, I can see no reason why it does not compare favorable with any other pursuit in life, as far as dollars and cents are concerned, and when I look at it as a fascinating and health-giving pursuit, it places most other avocations in the shade.

Borodino, N. Y., Oct. 17, 1882.

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For the American Bee Journal.

Bees and Honey Shows at Fairs.

S. HANSON.

Hagerstown, a picturesque, thriving town situated at the head of the Cumberland Valley, has been the scene of considerable excitement, occasioned by the Agricultural Fair; and the second meeting of the Union Bee-Keepers' Convention. The exhibits at the fair were unusually large and fine, and the number of visitors in excess of any previous year. As your readers are most interested in bee matters, we will omit a description of mammoth pumpkins, etc., and devote our time to a description of apiarian exhibits.

Mrs. L. Valentine had on exhibition, at the main hall, several fine specimens of honey in the comb; also, specimens of comb foundation.

Dr. Herman also showed several pounds of choice comb honey; both exhibitors receiving premiums.

The largest and most extensive, however, was that of "Sunnyside Apiary," Baltimore, Md., C. H. Lake, manager, and deserves especial mention. Mr. L. made his exhibit in a large tent, profusely decorated with flags, while the word "Apiary," in large letters, stretched upon the side, caught the eye of the visitors as they entered the fair grounds. Tables were constructed around the sides of the tent, laden with every conceivable appliance required in a first-class apiary. A magnificent display of bees, in variety, were shown in glass hives of unique construction, finished in ebony and maple, where every movement of the bees could be seen—the queens depositing their eggs, brood hatching, bees nursing, queen cells in all stages of development, etc.

Among the different varieties we noticed the new Holy Land or Syrian bee, the Cyprian and the Bellazona, claimed by the gentleman in charge to be the largest bee known in America. Also imported Italians, producing the so-called Albinos; Holy Land hybrids, also producing the same bee; Golden Italians and improved American strains of Italian and other bees.

A full colony of the most docile of any bees that ever came under my notice was that of a daughter of an imported queen of this season, were handled in public, without smoke or protection of any kind, and all the bees flying as if in their own home, upon our first visit to the tent. Later, we found them all confined, owing to the annoyance they gave the proprietors of the confectionery stands.

In the center of the tent, upon a raised base, was a pyramid of 220 lbs. of comb honey—the production of one colony of bees in about six weeks. This was shown in a case, constructed with full glass sides and erected with great taste. Upon the top stood a counter boy and shipping crate combined, filled with the most luscious nectar. The whole was crowned with a French glass shade, containing 18 sections of 1½ lbs. each, of the choicest and clearest honey ever seen in these parts, perfect in every particular and white as snow. On either side of the case was a photographic view of the apiary—the hives in full working order, showing the honey in the hives.

We noticed, in a conspicuous place, a photograph of an old friend and pioneer in bee culture, Richard Colvin.

Among the hives we saw the "Old Reliable," an air chamber hive, said to winter and summer the bee satisfactorily.

Among the new features were the Automatic self-spacing frame of tin or wood, that causes the frames always to fall into position upon the rabbet, and cannot be glued together by the bees.

The "Boss" feeder, on the principle of "Root's" Tea-kettle feeder, deserves attention. A grass-knife for cutting around the hives and adjustable to any bevel, were also noticed as being shown at this fair for the first time.

We came away, highly pleased with our visit and with the information gained through the popular manager of Sunnyside Apiary, who deserves much credit for his zeal and energy in the cause of bee culture and the courteous attention given to the many visitors who examined that fine display.

Philadelphia, Pa., Oct. 21, 1882.

Norwalk Chronicle.

Spring Management of Bees.

H. R. BOARDMAN.

The queen stops laying at the approach of cold weather, thus leaving the hive destitute of brood during the winter. but resumes her duties on the approach of spring. Usually brood rearing commences some time in February in the bee house or cellar, either later or earlier, according to the condition of temperature, and somewhat later on the summer stand. As the life of a bee is very short only a few weeks at most in the summer when in full activity, and as many months of the winter the occupants of the hive at the close of the winter are aged and infirm and their lease of life necessarily short, if no brood were raised to supply the places of the rapidly diminishing numbers of old bees at this season the hive would soon be depleted of its numbers. Colonies that are queenless may winter very well but they are very soon all gone when the warm weather of spring calls them into active life. The dying out of the old bees thus rapidly at this season when not accompanied by a corresponding increase from the hatching brood causes that much feared and much talked of casualty, spring dwindling.

Therefore, it is important that the bee-keeper see to it that the brood is hatching, to bridge over this important and critical period in the history of the colony.

It is a disputed point even among very practical bee-keepers as to how early brood rearing should be encouraged; but I think there need be no doubt about the economy of continuing it uninterrupted when once begun.

After brood rearing has continued for a time in winter quarters it will cease entirely for want of water, and colonies will suffer from thirst. The higher the temperature the greater the suffering. They may be supplied to a limited extent with drink, provided the temperature is high enough (not under 50). or, they may be set outside if the weather will permit and take the chances of sudden changes of cold and winter blizzards which is very demoralizing to colonies that have been wintered in a warm bee house. The prudent and thoughtful bee-keeper will often find himself in a dilemma at this point not easy to decide. Pollen is also necessary to carry on brood rearing to any considerable extent. If bees are out before natural pollen appears and the weather will permit, pollen may be supplied by a substitute of flour which will take the place of natural pollen.

Before the time comes in the spring to set the bees out permanently some attention should be given to the preparation of the yard. All rubbish, the harbor of the bee moth and its progeny, should be removed; the yard made level and smooth, the shrubbery trimmed, and everything possible done for the pleasure and convenience of the summer work and last, but not least, every stand leveled with a spirit level, for if this be omitted the combs in the hives will hang to one side and be built irregular. When all is ready the bees should be carried out on a warm day and each hive set upon its own stand from where it was taken.

Examination of all colonies should be attended to without delay on the first warm days after they have had a thorough flight, to determine: 1st. The amount of stores. 2d. The quantity of bees. 3d. If supplied with a good queen. This may be done by raising the hive and looking in at the bottom of a bottomless hive or box hive. thus determining at one operation the amount of stores and bees, or by removing the cover of the hive, if it has a fixed bottom. For more minute examination the hive must be opened, if movable-frame hive. If box hives are used they may be examined on cool mornings by raising the hive and examining the bottom board for immature young bees and larvæ, which determines as nearly as we can the presence of a queen. I would advise that all such colonies be transferred to movable-frame hives and queenless ones should be carefully marked, and particular attention given them at the first favorable opportunity, when the weather will admit.

Although these light and queenless colonies are really worth little, they will be a source of much trouble and annoyance if not looked after, by inducing robbing, which may result in a general demoralization of the whole apiary.

Weak colonies may be very much assisted by aid of the division board, by which we may contract the hive so as to confine the bees upon such a number of combs as they will be able to cover, and by placing the stores upon the other side of the board they are made accessible to the bees and constitute a perpetual feeder.

By use of the division-board too, we may unite such colonies as we wish to unite by placing the colony containing a queen on one side of the board, and carefully cover with a cloth or quilt, and the other colony deprived of its queen on the other side, leave them thus for several days when the board may be removed and the brood packed together as compactly as possible and the work is done. All queenless colonies before mentioned should be disposed of in this manner. I have practised this mode of uniting bees almost entirely for several years with the most perfect success.

If this work has been neglected and our bees are found robbing, the entrances of all hives should be closed, so that but one or two bees can pass at a time and if no disposition is shown to defend themselves the hives should be closed or removed to a room or bee house. If the hive is closed and the weather is warm and the colony of considerable strength, some caution should be exercised about their becoming heated and even melted down. If after carrying in, for a day or two, no disposition can be encouraged to defend their stores the sooner they are united with a colony of more spirit the better.

I have only to say in my opinion if bees have been properly wintered and judiciously managed during the spring there will be no such thing as spring dwindling.

There is neither excuse, nor profit, in having strong and weak colonies in the same apiary. The light should be encouraged by feed and strengthened by brood from the strong. A comb of brood just hatching from a strong colony placed in a weak one will give it an astonishing impetus, and in the place where the brood was removed from, the strong colony is supplied with a nice empty comb or foundation which will be filled with eggs, and the work of the hive go on without interruption. In this way the whole apiary may be built-up into uniform strength and when the harvest comes the result will be a uniform yield of honey.

The amount of honey, and consequently the amount of profit, depends entirely upon the force of workers we have ready when the harvest comes. If we feed when natural stores fail, and thus keep brood rearing steadily going on, the hives will be full of industrious workers when the harvest comes, our brightest dreams of a sweet harvest will be realized, and our bank balance will be a substantial encouragement of judicious management.

East Townsend, O.

For the American Bee Journal.

Purity of the Atmosphere.

S. CORNEIL.

To assist Mr. E. Moore in his investigations as to the purity of the air surrounding his hives permit me to make the following quotations:

"All gases of different densities which are not disposed to unite chemically with one another have a strong tendency to mutual admixture. Thus, if a vessel be partly filled with hydrogen and partly with carbonic acid the latter, which is twenty-two times heavier than the former, will not remain at the bottom but the two gases will in a short time be found to have uniformly and equably mixed. And it is on this principle that the constitution of the atmosphere is every where the same, although the gases which compose it are of different specific gravities."—*Carpenter's Principles of Comparative Physiology, page* 295.

"It (diffusion) is of the greatest importance in terrestrial physics being the cause of the uniform composition of the atmosphere at all elevations and one of the causes of the speedy dissipation of noxious gases and vapors in the open air."—*Chambers' Encyclopædia, subject, Diffusion.*

"There is a very remarkable property enjoyed by gases and vapors in general which is seen in a high degree of intensity in the case of hydrogen; this is what is called *diffusive power*. . . . It is impossible to overestimate the importance in the great economy of nature of this very curious law affecting the constitutions of gaseous bodies; it is the principal means by which the atmosphere is preserved in an uniform state and the accumulation of poisonous gases and exhalations in towns and other confined localities prevented."—*Fowne's Chemistry for Students, page* 112.

As Mr. Moore refers to some statements of mine made at the Toronto Convention, allow me to take this opportunity of saying that, in condensing the report, my remarks on that occasion have been very much mangled. For instance, I did not say that it required bacteria to produce dysentery, but that if there were any bacteria, the dampness and consequent fermentation in the hive, were the causes. There are other misrepresentations, but it is hardly worth while now to correct them. I wish to say, however, that in regard to the purity of the air in rooms I am correctly reported.

Lindsay, Ont., Oct. 16, 1882.

Translated from Bienenvater.

Gleanings from Germany.

A. R. KOHNKE.

In a village near Zempelberg, the tavern keeper was attacked by rowdies, who began to demolish his furniture, threatening also to abuse him him and his family. To save himself he ran out into the garden, picked up one of his colonies of bees and threw it through the window among the drunken crowd; the bees, enraged, went for them with a will, and cleared the house and premises in less than two minutes.

SPIRÆA ULMARIA.—The blossoms of *Spiræa Ulmaria* contain, as a natural product, salicylic acid. The plant is a native of Germany, where it grows in low, wet places and blooms from June till August; it attains a height of from three to six feet, and furnishes honey and pollen; in gathering which, the bees also gather the disinfectant. Cases of malignant foul brood having disappeared without the aid of the bee-keeper, it was discovered that it was due to the profuse bloom of this shrub. Thus, it appears, that nature has provided means to check and cure this dreaded pest among bees.

KNOWLEDGE OF BEES.—Reaumer remarks, that whenever he attempts to go near his bees in full state dress, they will sting badly, but when in his old dressing gown, will not molest him. [It is rather curious, but a fact, that my bees will not permit me to handle them in my fine suit, unless I give them a severe smoking, whilst in my every day clothes I can usually go about them without smoke, though both are of the same color.—*Translator.*]

OBSOLETE MEANS TO PROMOTE BEE-KEEPING.—One hundred years ago, in Prussia, prevailed a law that every farmer, being in possession of a certain number of acres, had to keep at least four colonies of bees; those having about half the number of acres, two, and those having a garden only, one colony. In case of neglect, the occupier of the premises was fined.

TO TEST THE PURITY OF WAX.—1. Specific gravity. Pure wax, whether bleached or not, has a specific gravity of between 0.956 and 964, generally from 0.958 to 0.960. Adulterations with stearic acid, resin or japanisian tree wax, makes it heavier; with those of paraffine or tallow, lighter.

2. Pure beeswax is dissolved by chloroform, on warming it; not so with adulterated wax.

RULES FOR BEGINNERS IN BEE-KEEPING.—1. Before you spend any money for bees or fixtures, seek the advice of an experienced bee-keeper, even if you have to travel many miles to obtain the same. What you profit, by good advice, will richly repay your traveling expenses.

2. Don't attempt to make your own hives, if you have nothing but a handsaw; but buy them in the flat, of reliable manufacturers.

3. Buy only strong colonies, even if they cost a little more.

4. Use but one style or kind of hive in your apiary.

5. Keep your colonies strong; do not divide for increase too soon; rather buy strong colonies.

6. See to it that your colonies have all worker comb, which may be had by the use of worker comb foundation.

7. If some of your colonies have not winter stores enough, feed them plentifully. One pound above what they will need will do no harm; if but one ounce is lacking, they will starve and the colony will be lost.

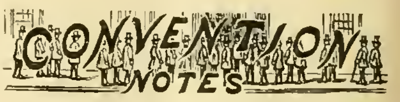
8. During winter, but especially in early spring, keep the colonies warm, otherwise the rearing of brood will proceed slowly.

9. In spring, contract the brood-nest by a division board, and add more frames only when the bees cover well what frames they have. Do not add more than one frame at a time.

10. What you do not understand, learn of bee papers, or books, but especially of your bees. Exercise your powers of observation to gain practical experience, and you will be successful.

Vienna, Austria.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.



Local Convention Directory.

1882. *Time and Place of Meeting.*

Nov. 1—New Jersey & Eastern, at New Brunswick.
J. Hasbrouck, Sec., Bound Brook, N. J.
3.—Iowa Central, at Winterset, Iowa,
Henry Wallace, Sec.
1883.
Jan. 16.—Eastern N. Y., at Albany, N. Y.
E. Quakenbush, Sec., Barnerville, N. Y.
16-18, Northeastern, at Syracuse, N. Y.
G. W. House, Fayetteville, N. Y.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

☞The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning County, in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th.

LEONIDAS CARSON, *Pres.*

☞The Iowa Central Bee-Keepers' Association will hold its annual meeting at the office of Graham & Steel, Winterset, Iowa, on Friday Nov. 3, 1882, at 10 a. m. All interested in bee culture are invited.

HENRY WALLACE.

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A. I. Root)	3 00..	2 75
Bee-Keepers' Magazine (A. J. King)	3 00..	2 60
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A. G. Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 6 above-named papers	6 00..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

The Monthly **Bee Journal** and any of the above, $1 less than the figures in the last column.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

SELECTIONS FROM OUR LETTER BOX

Winter Depository.—I began keeping bees with 9 colonies and now have 24, in Langstroth hives. I have taken 32 gallons of extracted honey and 400 lbs. of comb, and my bees are in splendid condition for winter. Sometime ago I took off the upper stories and removed to the lower story some of the combs containing brood, I noticed a great many dead bees. What was the cause of this? The operation was performed during the warmest portion of the day. I feel certain of great success another season, if I can winter without loss. I am about to build a winter repository for my bees, and will give you my plan. Our soil is clay loam; I shall make an excavation 4 feet in depth, wall it with stone to the top, and above the surface build a hollow wall 4 feet high, making 8 feet in all, and filling in, with spent tan bark. The wall will be 8 inches thick, tightly clapboarded on the outside. I shall then have another wall lathed and plastered inside of this, leaving 2 inches space between; this wall will connect with the ceiling, but will leave a small aperture at the base and will have ventilation by pipes. Do you think this will cause a current of air, and keep the room free from moisture?

S. J. YOUNGMAN.

Cato, Mich., Oct. 5, 1882.

[The dead bees were probably those that had been worn out during the honey harvest and had died of old age. The winter depository you describe should winter bees well, everything else being equal.—ED.]

A Good Report from Canada.—That cloud with the silver lining hovered over my bee yard for about ten days in the beginning of August. We were ready. Our dish was "right side up," and we obtained 152 lbs. per colony, in ten days, of basswood honey, and increased over 100 per cent. With all of the good reports in the BEE JOURNAL, I have seen none as good for ten days. All our colonies are in good condition and ready for winter, when it comes.

R. L. MEADE.

Nassagaweya, Canada.

Iowa Honey Crop for 1882.—Our honey season, and time for queen rearing has come to an end for the year 1882! It has been one which in Iowa was rich in the yield of honey-producing plants and all the blossoms rich in the production of honey after they once commenced. The spring was a month later than usual, but the honey season after it commenced continued until October. Swarms continued to issue till the 10th of September, and have generally collected enough honey to winter on; though coming off so late. I had 5-lb. honey boxes filled and capped over, that were put on during the last week in August. Tons upon tons of honey is the result.

E. L. BRIGGS.

Wilton Junction, Iowa, Oct. 21, 1882.

Wintering Bees in Clamps.—On page 254, of *Cook's Manual*, is a brief and favorable mention of wintering bees in clamps, and I have met the recommendation in other sources of information. Having no cellar fit for winter storage of bees, but a sand bank, easy to excavate, and with perfect natural drainage, near my apiary, I intend to bury two or three colonies, as an experiment. Please give us some information on the subject in the BEE JOURNAL?

W. B.

Louisville, N. Y., Oct. 23, 1882.

[Mr. M. Quinby favored wintering bees by burying, which is practiced by many at the present day. The mode is to dig a trench in a hillside or ground with sufficient slope to insure drainage. This is partly filled in with straw, on which the hives are placed; boards are slanted up in front; wooden tubes placed in position to ventilate the pit, straw thrown on the hives, over which boards are laid lengthwise, and dirt piled over all to turn off the water.—ED.]

Well Satisfied.—I began the season with 19 colonies; increased to 56, and have taken 2,000 lbs. of extracted and 200 lbs. of comb honey. Thirty of the colonies are in two-story Langstroth hives, full of sealed honey and some brood in the lower story. By weighing the combs and averaging the surplus stores to be removed, I find that my bees have gathered about 5,668 lbs. of honey in 60 days, and have sufficient amount remaining to winter on. When I gave the report before, I had only taken a portion of the honey and averaged the rest.

WM. MALONE.

Oakley, Iowa, Oct. 15, 1882.

His First Report.—As this is my third year in bee culture, and I have never made a report, I think it would be in order to do so now. My wife bought the first colony of bees three years ago. Last year we increased to 19 colonies, lost 1, sold 1, and with the remaining 17 I began this season. Our colonies now number 41. We have taken 1,435 lbs. of comb honey from them in one and two-pound sections, and 78 pounds of extracted, giving us an average of 89 lbs. per colony, spring count, and my bees are in splendid condition for winter.

G. E. HILTON.

Fremont Center, Mich., Oct. 24, 1882.

Late Breeding of Queens.—I had two queens hatch on Oct. 7; three weeks later than I ever had any before. To-day (Oct. 17), both were fertilized, a thing I could hardly believe would be done. In my 23 years' experience I never had it occur before. The weather has been very warm here for several days, but not much sunshine till to-day. We have had no frost here as yet to kill even the tenderest vines. Our fields and hills are as green as in June.

H. ALLEY.

Wenham, Mass., Oct. 17, 1882.

Botanical.—I send by mail a plant called the *spider weed* here. It secretes nectar plentifully early in the morning and late in the evening. It dies down in midsummer and a second crop comes from the seed and blooms until frost. Please give correct name in BEE JOURNAL.

GEO. E. BOGGS.

Milledgeville, Ga., Oct. 16, 1882.

[The plant is *Gynandropsis pentaphylla*, for which I know no common name. It is a native of the West Indies, but has become naturalized over a wide area of the southeastern States, and seems well adapted to its new home. The small family to which it belongs (*Capparidaceæ*), is made up of plants having fine flowers and an abundance of nectar, of excellent quality.—T. J. BURRILL.]

How to Keep Honey.—How can we keep unripe or partly ripened honey, from June to cold weather? I extract when the bees begin to cap the cells, and sometimes have a portion of it sour.

H. M. MOYER.

Hill Church, Pa., Oct. 23, 1882.

[Keep it in an open vessel, exposed to the sun and air, where it may ripen before barreling it up. The Californians use a sun evaporator for this purpose, with success.—ED.]

Two-Story Hives for Winter.—I have two colonies of bees, in two-story hives. Will they winter as well without taking off the upper story?

WM. ROBERTS.

Vaughansville, O., Oct. 17, 1882.

[You can leave the upper story on and use it as an air-chamber over the chaff packing, if you winter on the summer stands. If you put the bees in the cellar, take off the upper story and cover, put a quilt over the frames, and leave the entrances open.—ED.]

Good Honey Crop in New York.—I have just marketed 16,800 lbs. of comb honey from 250 colonies, spring count, and increased nearly 90 per cent.

GEO. W. HOUSE.

Fayetteville, N. Y., Oct. 18, 1882.

Best Crop ever had in Illinois.—This has been one of the best seasons for bees and honey we ever had in this region.

T. G. McGAW.

Monmouth, Ill., Oct. 23, 1882.

Almost a Failure.—Honey was almost a failure with us this year. I increased from 6 to 18 colonies, and have taken 96 lbs. of extracted, and 56 lbs. of comb honey. My bees are in good condition for winter.

CHAS. H. HISGEN.

Hopkinsville, Ky., Oct. 23, 1882.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eigh words;** fourteen lines will occupy 1 inch of space Transient Advertisements payable in advance.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisemen published WEEKLY as follows, if the whole paid in advance :

For **4** weeks		........**10**	per cent. discoun	
" **8** "		........**20**	"	"
" **13** "	(3 months)....	**30**	"	"
" **26** "	(6 months)....	**40**	"	"
" **39** "	(9 months)....	**50**	"	"
" **52** "	(1 year)	**60**	"	"

Discount, for **1** year, in the MONTHLY alone **25** per cent., **6** months, **10** per cent., **3** month **5** per cent., if wholly paid in advance.

Discount, for **1** year, in the SEMI-MONTHLY alone, **40** per cent., **6** months, **20** per cent., **3** months, **10** per cent., if wholly paid in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate fo the time the advertisement *is* inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ The American Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

* * *

Premiums.—Those who get up clubs for the Weekly BEE JOURNAL for one year, will be entitled to the following premiums. Their own subscription may count in the club:

For a Club of **2,**—"Bees and Honey," in paper.
" " **3,**—an Emerson Binder, or "Bees and Honey," in cloth.
" " **4,**—Apiary Register for 50 Colonies, or Cook's Manual, paper.
" " **5,**—Cook's Manual in cloth, or the Apiary Register for 100 Colonies
" " **6,**—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Two subscribers for the Monthly will count the same as one for the Weekly, when getting up clubs for the above premiums.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL, }
Monday, 10 a. m., November 1. 1882. }

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—I am paying 6½c. for dark and 9c. for light extracted.

BEESWAX—Choice lots are worth 25c. here; bright yellow, 24c.; dark to good. 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 16@20c. on arrival; extracted, 7@10c. BEESWAX—Firm at 20@25c. per lb. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand increases with the cool weather, but not sufficiently fast to keep pace with receipts, which now accumulate, as it is time to get the surplus into market. Prices remain unchanged with perhaps a tendency downward, owing to many consignors desiring to realize quickly.

We quote: white comb, in small sections, 18@20c. Fine, well-filled, 1 lb. sections bring the outside price. Dark comb honey, little demand, 15@16c. Light honey, in larger boxes, 12@16c. Extracted—white clover, 9½@10c.; dark, 8@9c., in barrels and half-barrels. Kegs will bring but a small advance, if any, above half-barrels.

BEESWAX—Very scarce. Choice Yellow, 30c.; dark to fair, 20@24c.

R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—Extra choice, either comb or extracted, is inquired for, and extreme figures are offered.—Nearly all offered is second or third quality, for which the demand is not active at the prices demanded.

We quote white comb, 18@20c.; dark to good, 12@15c. Extracted, choice to extra white, 9½@10½c.; dark and candied, 7½@8½c.

BEESWAX—28@30c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Prices unchanged and dull. Comb 15@18c—latter for choice white clover in small packages; strained in round lots at 6@7c.; extracted in cans at 9@10c.

BEESWAX—Sold fairly at 26@27c. for prime.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—In sections, has been in extraordinary demand this week, at full prices. Sales have been quite up to receipts, and all lots except recent arrivals were closed out. One pound sections of best white sells for 21@22c. per pound, in attractive packages. Same quality, in less attractive shape, 20@21c. In 1½@2 lb. sections, best quality, 19@20c. Second grade sells about 1@2 cents ℔ lb. less. Buckwheat is unsalable. Extracted, in small packages, pails and tin cans sells pretty well at 14@15c.; but extracted, in barrels, is very dull at 10@11c.

BEESWAX—Prime quality, 25@28c.

A. C. KENDEL. 115 Ontario Street.

NEW YORK.

HONEY—There is some little enquiry for fancy lots, and our quotations have been exceeded for small lots. We quote: White clover, fancy, small boxes, 19@20c; white clover, fair to good, 16@18c. Buckwheat, 13@16c.

BEESWAX—The receipts of wax continue rather moderate, but the high prices asked checked the demand, and the tone at the close is a trifle easier, with 31c. about the top, and only reached for strictly prime. Western, pure, 29@30c; Southern, pure, 30@33c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Sells very readily in 1 lb. sections at 22@25c. for best white, and 20@22c. for 1½ to 2 lb. Boxes containing ½ pound, 30 c. per pound. Extracted is selling very slowly at 12@14c.

BEESWAX—25@26c.

CROCKER & BLAKE, 57 Chatham Street.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

* * *

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......	$1 00
" 100 colonies (220 pages)......	1 50
" 200 colonies (420 pages)......	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

* * *

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

* * *

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

* * *

☞ Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

* * *

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

* * *

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

* * *

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

* * *

Kendall's Spavin Cure is used from the Atlantic to the Pacific coast.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly is now permanently established, and will be continued as heretofore.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

◆

Every lady should send 25 cents to Strawbridge & Clothier, Philadelphia, and receive their *Fashion Quarterly* for six months. 1,000 illustrations and four pages new music each issue.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

IMPORTANT TO BEE-KEEPERS!

TWENTY-THREE years' experience in rearing queen bees. The cheapest, easiest and best way to raise queens. Never before published. Something new. Send for Circular.
44w2t HENRY ALLEY, Wenham, Mass.

LANGSTROTH AND SIMPLICITY CHAFF HIVES, with movable upper story, section boxes, metal-cornered brood frames, wide Langstroth frames and comb foundation. Send for Price List. A. B. MILLER & SON,
44wtf Wakarusa, Elkhart Co., Ind.

SECTIONS.

We make a specialty of our "Boss" One-Piece Sections. Patented June 28th, 1881. We have not sold any right to manufacture, therefore we caution the public against buying any One-Piece Sections not bearing our stamp. Send for Price List.
JAS. FORNCROOK & CO.
Watertown, Jeff. Co., Wis., Sept. 1, 1882. 36m5t

1882. JOSEPH D. ENAS, 1882.
(Sunny Side Apiary,)
Pure Italian Queens,
BEES, COLONIES, NUCLEI,
Extractors, Comb Foundation, etc.
Address, Sunny Side Apiary,
9m8t Napa P. O., Cal.

ALFRED H. NEWMAN,
Dealer in all kinds of
APIARIAN SUPPLIES,
AND
HONEY AND BEESWAX,
923 West Madison Street,
CHICAGO, ILL.
MY ILLUSTRATED CATALOGUE
sent FREE upon application.

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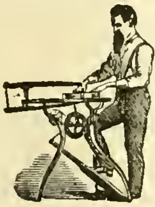

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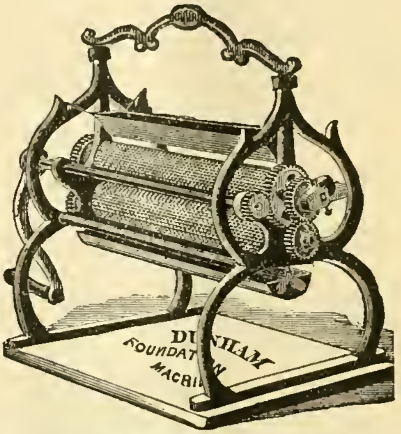

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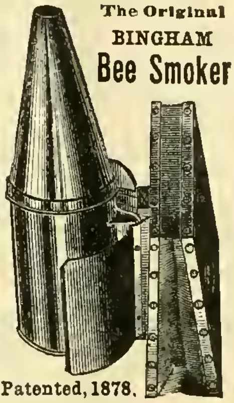

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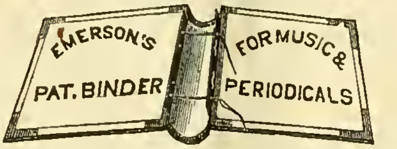

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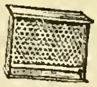

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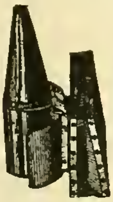

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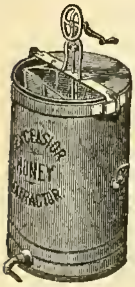

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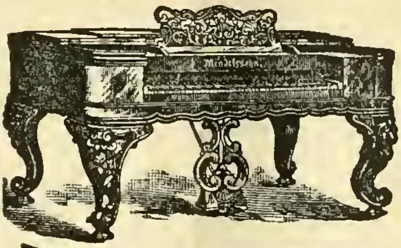

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THE AMERICAN BEE JOURNAL

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.............................. 705
Glutting the Honey Market.................. 705
The Glucose Fraud.......................... 705
Home Market................................ 705
Interesting Statistics..................... 706
Honey as Food and Medicine 716
Honey and Beeswax Market................... 717
The Apiary Register........................ 716

Among Our Exchanges—

Does the Queen lead the Swarm?............ 707
Enormous Honey Yields...................... 707
Honey Harvest Abundant..................... 707
Prepare for Winter......................... 707

Correspondence—

My Experience with the New Bees........... 708
Electric Alarm for the Apiary.............. 708
The Wintering of Bees...................... 709
Progress of Scientific Bee Culture......... 710

Convention Notes—

Local Convention Directory................. 710
Convention Notices......................... 710
Southern California Convention............. 711
Northern Ohio Convention................... 711
Inter-Breeding of Bees..................... 712
Utah Convention............................ 713

Selections from Our Letter Box—

Sweet Clover Still in Bloom................ 714
Cowardly Bees.............................. 714
One hundred pounds of Honey per Colony 714
Chilled Brood and Robbing.................. 714
Peppermint to Prevent Stings............... 714
Bees in Clamps............................. 715
Sweet Clover yet Alive with Bees........... 715
Entrance-regulating Bottom Board........... 715
Planting Basswood Trees.................... 715
Troublesome Mice........................... 715
Will it Pay to use Sections?............... 715
Honey Crop for 1882........................ 715
My First Experience........................ 715
Sundry Questions........................... 715
Candied Honey.............................. 715

Glutting the Honey Market.

President J. E. Pleasants, at the meeting of the Southern California Bee-Keepers' Association, makes this remark: "There are now no more fears of glutting the honey market; for the foreign demand is almost unlimited. We have for years been knocking at these foreign doors, and now that they are opened, it rests with us whether they shall remain so, or not. We can here produce honey which is fit for the gods, and only such ought to be put upon the market."

Mr. Pleasants is right—the markets of the world are now open to us, and will take all the honey that we can produce—but it will be mainly extracted honey that will go abroad. There is too much risk attending the shipment of comb honey to foreign ports for it ever to become a staple in those markets. Hence, the necessity of properly ripening extracted honey, and putting it in convenient packages, to suit the trade of the world.

It is only a year ago that we said the day would speedily come when agents of the great metropolitan markets would scour the country for honey, as they do now for butter and eggs. This is now an accomplished fact. Agents from New York and Boston, have, this fall, been sent to visit the larger producers of honey, to buy their crops at their very doors, and tons upon tons have been so purchased this very year. This does but presage the coming demand, and clearly indicates the fact that honey has become a staple product.

Just now the home markets are fully supplied, but very soon the foreign demand will clean them out, and then we may look for a more lively demand and better prices.

◆

The Glucose Fraud.—In answer to a query concerning glucose, the Chicago *Inter-Ocean* says:

"Glucose is essentially the same as grape sugar, and glucose syrup is nearly identical with pure strained honey. It consists of 24 parts of carbon to 28 each of hydrogen and oxygen, whereas cane sugar contains the same amount of carbon to only 22 parts each of hydrogen and oxygen. It is manufactured from the starch in corn and other grains, by the action of dilute acids and alkalies, by a process too technical to be described here. It is not unwholesome, but does not possess the same degree of sweetness as cane sugar."

In stating that commercial "glucose syrup is nearly identical with pure strained honey," the *Inter-Ocean* is assisting a fraud, and winking at adulteration. It is *not* honey, but a fraudulent and poisonous adulteration, prepared by the use of suphuric acid, and should be avoided and denounced by all honest persons. To sell it for honey is a swindle upon the purchaser, aided by the *Inter-Ocean*.

◆

Home Market.—The Pine Grove, Pa., *Herald*, says that Mr. W. H. Stout, of that town, has been very successful with his bees this year, and that they have gathered a large quantity of a very superior quality of honey, that he has sold readily at 25 cents per pound in his home market.

◆

☞ In answer to several inquiries we will state that the *American Bee Keeper*, Lebanon, Mo., is the bee paper we mentioned some time since, that has issued no number since August. If any have been published they have not been received at this office, and it is to be presumed that it also has "ceased to exist."

Interesting Statistics.

We have heard it remarked that the North American Bee-Keepers' Society, at its late meeting at Cincinnati, O., appointed a committee for the purpose of collecting statistics on "Bees and Honey," to report at the next meeting of the Society. And we are further informed that we were appointed a member of that Committee—perhaps the Secretary will be able to tell us if such is the case, though nothing is said about it in his report, published in *Gleanings in Bee-Culture.* And we should also like to know who were appointed on that committee, and what they were requested to attempt to accomplish. We say attempt, for we well know the difficulties attending such a work, and the expense and labor it entails, especially if it is to encompass the whole of the territory embraced by the "North American Bee-Keepers' Society."

Speaking only for ourself, we regret that any part of such a work is demanded of us, for we have already more labor than we can perform with any degree of satisfaction to ourself and others, but we will do all we can to further the object—if it is to be accomplished.

Dr. Miller, the President of the Northwestern Bee-Keepers' Society has figured out some statistical items of interest, in connection with the Tables already published of the two conventions held this year in Cincinnati and Chicago. Believing that these items will be read with interest, we give them to our readers in full. They are as follows:

On page 681 of the Bee Journal is given a statistical table of fifty apiaries, represented at the Northwestern Convention at Chicago. Summing up, we find as follows:

Total No. colonies last fall	3,339
Average No. to each apiary	67
Colonies lost in winter	85
Colonies lost in spring	79
Colonies beginning the season	3,122
Colonies devoted to other purposes than honey	62
Colonies at present time	5,432
Average No. per Apiary	108⅛

Production.	Pounds.
Total comb honey	167,510
Average for each owner	3,350
Average for each colony	53½
Total extracted honey	107,960
Average for each owner	2,159
Average for each colony	34½
Total production, both kinds	275,470
Average per owner	5,509
Average per colony	88

On page 664 of the Bee Journal, is given a recapitulation of reports from 53 apiaries represented at the North American Convention at Cincinnati. A comparison of the two may be interesting, if not instructive. It is not wise to draw conclusions hastily, and whether the favorable showing of the Northwestern, in some respects, as compared with the country at large, is due to locality, to a specially favorable season in the Northwest, to an adverse season in other localities, or to some other circumstance, I will not pretend to say.

The average number of colonies last fall, per owner, is nearly the same, being 66 for the North American and 67 for the Northwestern.

The North American lost 1.89 per cent. in wintering, the Northwestern 2.55 per cent., a small loss in each case, but the loss of the Northwestern was about one-third greater than the North American. On the other hand, the North American lost nearly double as much as the Northwestern in spring, the loss of the North American being 4.12 per cent., that of the Northwestern 2.37 per cent. Taking both winter and spring, the North American lost 6.11 per cent., the Northwestern 4.92 per cent. In neither case was there a very heavy increase of colonies. Taking the spring count as a basis, the North American increased 53.8 per cent., and the Northwestern 73.9 per cent.

Of the colonies of the North American, 20½ per cent. were used for other purposes than honey-raising and only two per cent. of the Northwestern.

Deducting these, in each case, from the spring count, we find the number of pounds of honey, per colony, to be as follows:

	North American.	North-western.
Extracted	40.7	35.2
Comb	19.3	54.7
Both kinds	60.0	89.9

Thirty-two per cent. of the North American's honey was comb, and 60 per cent. of the Northwestern's.

Looking at individual results, some unusual ones are given on page 681.

It is difficult to compare results where one man runs for increase, a second for comb honey, and a third for extracted.

In order to have something as a basis, although I am not at all sure it is a correct one, I have figured the net profit of increase at $5 per colony, the net profit on comb honey at 16 cents and extracted at eight cents per lb.; and, at this rate, I give below the gain, per colony, of several bee-keepers, naming first the number of colonies kept by each:

D. Rawhouser	15	$44 73
L. H. Scudder	63	29 35
H. Newhaus	34	28 82
H. W. Funk	75	27 87
P. P. Nelson	20	24 20
M. L. Trester	20	22 50
J. K. Snyder	43	21 95
Oatman & Son	229	20 88

These are certainly very desirable results, but to know more definitely about them we should know something about the quality and condition of the honey, also the condition of the new swarms. Mr. Rawhouser could hardly have gained his success without season and locality of first quality, yet even then it would require the management of a first-class bee-keeper. It would have been interesting to know the result with ten times the number of colonies, and this is, I am afraid, too often not taken into account as it should be.

I admire the results obtained by Messrs. Scudder and Funk more than those of Mr. Rawhouser, because they had four or five times the number of colonies, and the item which most nearly excited my envy in looking over the whole list is that of Oatman & Son, who, although they make a poorer showing by colony than any others I have named and some I have not named, more than make up for it by getting such magnificent aggregate results. Too much stress is apt to be laid on exceptional yields from single colonies or a few colonies; I am more interested to know the yield per apiary or per man.

C. C. Miller, 174-202.

Marengo, Ill., Oct. 30, 1882.

If we are correctly informed Dr. C. C. Miller is also a member of the committee mentioned above. He is just the man for the work, being perfectly at home in figures. He has a clear head, sound brain, and unbounded energy.

Anticipating our getting up a statistical table this year, we have received the following:

Report of W. C. Preston, Iowa City, for 1882. Occupation, teacher.

No. of colonies in spring	14
No. of colonies on hand now	27
No. lbs. comb honey	100
No. lbs. extracted	2800
Total	2900
Pounds average, spring count	207

Wintered in chaff packing.

Editor Bee Journal:—The above is my contribution toward making up statistics of the honey industry for 1882.

It is to be hoped that the task, so well begun by you last year, and of such great importance to the bee-keeping craft in general, will be taken up again this season, and that you will have the hearty co-operation of all bee men throughout the Union in making these statistics as complete as possible. I have no doubt all the apiarists of this city and vicinity will send in complete reports.

Wm. C. Preston.

As before stated, we shall not get up a statistical table this fall. As the different societies are now getting up tabular statements there is no need of our doing so. We may, however, at some future time, aggregate them, to ascertain the consolidated results.

* * *

☞ New subscribers for the Weekly Bee Journal for 1883, can obtain all the rest of the numbers for this year by sending $2 to this office.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Does the Queen Lead the Swarm ?—The *British Bee Journal* remarks as follows on this subject, correctly concluding that she does not :

> There is an impression prevailing among the uninitiated that the queen of a hive leads off the swarm, but this is by no means the case with first issues, for, as a rule, the queen does not come forth from the hive until the greater part of the bees are on the wing. Another erroneous idea in existence is that the queen bee is the first to alight upon a branch or a bush, and that the bees congregate about her, but the reverse of this is the fact. When a swarm begins to issue, if the bee-keeper will place himself on the shady side of the hive and watch the stream of bees which pour forth like an army through a gateway, he may see the queen come out, and, if inclined to prove our assertions, he may capture and cage her, and put her in his pocket while he watches the proceedings of the bees. When the throng is circling in the air he may imagine that the bees are searching for her, and will perhaps conclude that as they cannot find her, they will return at once to the hive ; but no, they will first congregate near a convenient tree or bush, and make a great noise sufficient to attract the attention of her majesty, if she were abroad, and they will alight and form a cluster, and wait for some minutes to give her an opportunity of joining them. If now she be taken to them, she will join the mass and all will be well ; if not, the bees after a short time will disperse and return to the hive. Now this kind of experiment has been so often proved that it may be taken for granted when a swarm of bees has alighted, and afterwards returned to the hive, that the queen was not able to join them, or she would assuredly have done so.

Enormous Honey Yields.—The *Bee-Keepers' Magazine*, for November, contains the following enormous yields of honey from one colony of bees during the past summer :

> Mr. Ira Yager, Vice President of the New Jersey and Eastern Bee-Keepers' Association has taken 496 pounds of nice honey from a single colony of bees. If any other Jerseyman has ever beaten this, let him report at once. Mr. Y. has 132 colonies. He reports the season as poor.
>
> Mr. B. F. Carroll, of whom so much has been said in the bee papers, has at last accounts reached the enormous and unparalleled yield of 800 pounds of nice honey from one colony, and the end is not yet. Texas is the banner State and Mr. Carroll now wears the belt. Who dare prophesy that 1,000 pounds will not yet be taken from single colonies when the cultivation of honey crops shall be fairly inaugurated ?
>
> Since writing the above regarding Mr. Carroll's wearing the belt, the following has come to hand. Dr. Farley, of Raleigh, Navarro Co., Texas, has a colony of bees which has sent out ten swarms, and from these and the old colony he has taken about 1,200 pounds of comb and extracted honey. Now, reckoning this honey at only ten cents per pound, and the new colonies (*from this one hive*) at only $3 each, and we have $150 as the product of one colony in one season, which is 32.50 better than friend Carroll has done, and he sold his honey at 15 cents per pound, all but 100 pounds which brought 12½ cents per pound. The report comes backed up by good authority, and if not disproved, it entitles the Dr. to the "belt."

Honey Harvest Abundant.—The Cedar Rapids, Iowa, *Standard* in an article on keeping bees, says :

> The honey crop of this year exhibits the general affluence ; it is abundant and very good. Clover, buckwheat, tulip blossoms, horsemint, goldenrod, Spanish needles, and other producers of nectar, have borne an unusual supply of sweets, and the bees have faithfully gathered it and stored it in the hives provided by man for their accommodation and spoliation. At the recent Convention of the North American Bee-Keepers' Society, at Cincinnati, it was stated that in 1870 only about $1,000,000 was invested in the pursuit, but in 1879 the profits of it were estimated at $16,000,000—showing that the delightful and profitable business of bee-keeping is beginning to attract the attention it so richly deserves.

Prepare for Winter.—Mrs. L. Harrison, in the *Prairie Farmer*, gives the following advice, including her plan for preparing bees for winter :

> The Good Book says, "look well to thy flocks and thy herds," and I suppose that the bees were such tiny folks that they were forgotten then, as they are now, by most farmers, except when they happen to think that there might be some honey in the hives, or they make an uproar by swarming.
>
> Although the fall has been so lovely, warm and balmy, day after day, there may be cold, driving storms and blizzards before flowers bloom again, and we should be prepared for their reception. Bees never freeze to death—O, no ! they are dead before they reach the freezing point. And they are not a bit like fish, for they cannot live in the water. Therefore they should have a good roof over their heads ; a leaky roof has caused the death of many a fine colony of bees. The severe winter of 1880-81 caused such havoc among our bees, that we hesitate to give directions for others to follow. That season, with few exceptions, they flew on the first of March, but many of them died by spring-dwindling before flowers bloomed. They were in tight, closely-jointed hives, well painted, and not a leaky roof among them, and the bees covered with chaff cushions.
>
> Perhaps they were coddled too much. In the spring we purchased a black colony of bees, in a Langstroth hive, made by a saw and hatchet carpenter, with such loose joints that the bees are always trying to enter them when honey is scarce. This colony, the owner said, "he didn't care whether it lived or died," and took no care of it whatever ; and yet in the spring it was boiling over with bees, and was a bonanza to us in strengthening up our weak colonies.
>
> Many instances similar to the foregoing show that bees can endure cold, but that impure air is fatal to them.
>
> How to protect our bees so that they will keep dry, have pure air and no cold draughts through the cluster, seems to be the desideratum for successful wintering. Old settlers tell us that when they dwelt in log cabins, with their great fire-places and roaring chimneys, their families were healthier than they were after they built comfortable houses ; and that their fowls, roosting in trees, and bees in log gums which sometimes cracked from top to bottom, lived through it, and never had cholera. What are we going to do about it ? Go back to log houses and gums ? Heaven forbid ! But we are going to have pure air and keep comfortable at the same time.
>
> Some of our readers may like to know how we are fixing up our bees for winter. On part of our bees we place Hill's device, which is similar to this : If a keg hoop was cut into four pieces, and a strip nailed to the middle of each, so that they would be three inches apart, it would form a hollow under which the bees can cluster, and pass readily from frame to frame. On this we spread new muslin, and it reaches over the frames far enough so that when the cap is put on, the bees are securely fastened below. We have not devices enough for all, and on the remainder we place four corn cobs, which we think will answer the purpose as well. Our bees are in the eight frame Langstroth hives, and we have made a tall hive of a few of them by putting four frames in the upper hive or cap, right over the four in the lower story. These frames are in the center of the hive, and we put chaff or dry leaves each side. We leave the entrance open and the same size as in the summer. Chaff cushions, four or five inches in thickness, are put in the cap over the bees, and complete the outfit for every hive. An abundance of fresh air is given above the cushions by raising the covers. It would be better to bore holes in the cap at each end, under the projection of the roof.

☞ Articles for publication must be written on a separate piece of paper from items of business.

☞ When changing a postoffice address, mention the *old* as well as the new address.

CORRESPONDENCE

For the American Bee Journal.

My Experience with the New Bees.

G. M. DOOLITTLE.

In the fall of 1881, I obtained some of the new races of bees to give them a trial, for how should I know for certain of their superiority, or otherwise, unless I tried them myself? To be sure, I had heard what others had said, *pro* and *con* regarding them, but these persons did not live in my locality, neither would their tests be the same that I should apply. This is where the reader of bee lore often draws wrong conclusions, and the different opinions of various virtues clash. The same locality, and the same tests would reconcile much that now appears to be directly opposite in its teachings.

On an average, neither the Cyprians or Syrians came out in the spring as strong as the Italians, but if we had had a winter like 1880-81, the case might have been different, still I am satisfied that in a mild winter, their wintering qualities are inferior to the Italians, as my experience is, they are more restless, thereby causing greater mortality, and a greater consumption of honey. From all reports, I expected to see them start to brood-rearing more rapidly in the spring, than the Italians; but in this I was disappointed, for they were nearly a week behind, and kept so until into June, when, about the time the Italians commenced to swarm, they began to exert themselves beyond anything I ever saw done by the Italians.

In this matter of brood-rearing the Syrians seemed to be ahead, beginning a little sooner, and filling every available cell with brood during the month of July; but as fall came on apace, I could see no difference between them and the Italian, as regards late brood. Right in the height of the honey season, they fill their hive with brood to overflowing, and with a person who does not spread brood so as to get every available cell full at the commencement of the honey harvest, this trait is just the thing, for no matter how much honey there is in the brood-chamber, or how fast it comes in from the field, the Syrian queens are not to be crowded down to a small portion of the bottom of the combs, with honey, as the Italians sometimes are. This is splendid for those who do not wish to be to the bother of getting their bees ready for the honey harvest.

I also found they would enter the boxes much more readily, if left to themselves, than would the Italians, and the capping to their cells of honey was whiter than those of the Italian; much resembling the work of the blacks in this respect. The yield of comb honey from them, nearly equaled the average yield throughout my yard and it was excellent in quality.

I was quite enthusiastic regarding the Syrians (and should have been over the Cyprians had they not been so vindictive) until I came to prepare them for winter, when I found that, while nearly every one of my Italians had from 10 to 15 lbs. more honey in the hive than they needed for winter, these new bees had to be fed about that amount, to give them honey enough to winter upon. This sustains friend Heddon's idea, as regards the possibility of our having too much brood for profit. It also sustains what I have said regarding the preparing of our bees, in just the right time for the harvest and not afterward, thus having them consumers, instead of producers. Could I have had a good yield from buckwheat these bees might have been of use, if they had not still kept on breeding to such an extent as to consume the larger part they gathered.

One thing I noticed of the Cyprian bees, which I have never seen in print, was that they were from 1 to 2 hours later in starting out in the morning, than any of the rest of the bees. Hot mornings, during basswood bloom, the other bees would be tumbling down, on the bottom boards to their hives, with great loads of honey, before sunrise, but scarcely a bee would be seen to leave the Cyprian colonies, until an hour after sunrise, when they would sally out with a rush, and seem to work faster than the rest for a few hours, after which, the difference was not noticeable. As to vindictiveness, the Cyprians are ahead of anything I ever saw, as soon as the hive was opened, but if undisturbed, a person could walk in front of their hive, and sit there without being molested; but raise the cover to the sections, where there was glass on one side, and they would rush toward you, against the glass, with perfect fury, and if there chanced to be a few on the outside of the sections, but separated from the main cluster, they would dart on to me, taking hold with such a grasp that it was impossible to shake them off. With all other bees I ever saw, a few bees isolated from the cluster will not sting, but on the contrary run till they can find a place to join the cluster.

The Syrians I found quite peaceable, until deprived of a queen, when they were nearly as bad to sting as the Cyprians. In not a single point, did I find the Cyprians superior to the Italians, unless I except the whiteness of comb produced, and in many points they are inferior. Their stinging quality was the worst of all, and effectually debars them from being kept, as a pure race, in my opinion. I care for no further experiments with them, and shall supersede them with my more worthy Italians.

As to the Syrians I have them from 4 different parties, and shall try them again another year, being careful, as in the past, to clip the heads of all the drones, till I find them worthy of a permanent place in my apiary.

Borodino, N. Y.

[The new races of bees are now on trial—let it be a thorough one.—Ed.]

For the American Bee Journal.

Electric Alarm for the Apiary.

C. H. DIBBERN.

Mr. Kohnke has described, in the Bee Journal on page 682, a very good electric thief alarm; but it strikes me as being too complicated and expensive for most of us. I have had an automatic alarm in use, the present summer, that works like a charm, and did not cost me over twenty-five cents.

During the past few years I have been greatly annoyed by thieves robbing my hives and even carrying them off whole. In June, these depredations commenced again, and my son and I then put our wits to work to trap the thieves.

Every apiary has one or two sides that are particularly exposed to thieves. On these exposed sides we drove stakes so that the top would be about eighteen inches high, into these we put common screw eyes. Now we ran a copper wire, such as is commonly used for private telephones, through these, and into one corner of our work shop. Here we place a trap, which consists of a weight of about twenty pounds, fastened on the end of a two-foot piece of wood. Now fasten the other end to side of shop, with a screw, so that the weight arm will move up and down easily. Now attach your trip wire to the arm, so the weight will be suspended high and drawing the wire tight. Now cut the wire near the trap and connect it again by bending the ends slightly and hooking them together, so that any pull on the outside wire will cause the wire to part, and let the weight drop. The same will happen should the thieves cut the wire. All sharp angles in this wire should be run over screw pullies. Now to the weight arm attach another wire, to run to the house. At the house we placed an old clock that was worn out, all but the striking part. Tie a string to the ratchet that holds the strike wheel, and over through a hole in top of clock and attach to the wire. Tie a nail or button on the wire, where it comes through the wall, so that the weight in the shop can only pull the end in the house, an inch or two, so it will set the clock striking, but not bind the striking parts. If properly put up, and any person comes against the trip wire, it will be sure to break at the hook splice; this will cause the weight to drop, giving the house wire a sharp pull, instantly making the clock strike.

Now, jump out of bed, get your revolver quick, and run out into the apiary in your night clothes, as I have done several times this summer, only to hear some one jump over the fence, and disappear in the bushes and darkness. You can blaze away, anyhow, and have a little Fourth of July all to yourself. Now you can go back to bed, and congratulate yourself that you was too smart for them that time.

By a little ingenuity the trip wire can be run across windows in honey rooms or other places where thieves are liable to break in.

Milan, Ill., Oct. 27, 1882.

The Wintering of Bees.

D. A. JONES.

This is a subject which has baffled our most scientific bee-keepers for ages, and a doubt still seems to exist in the minds of some if this subject has been fathomed, which, however, to my mind, is not the case. To me the wintering of bees is very simple, and I have no more question about wintering every colony in proper condition than I have in wintering horses, cattle, or any other kind of stock. It is only necessary to have a knowledge of their requirements; complying with these, means success.

I have tried all the different methods; spent thousands of dollars in experimenting, and have no hesitation in saying I have had a larger and more varied experience than any other bee-keeper. I have succeeded for years in wintering by the system which I have adopted, and hundreds of others have been successful who have carefully followed the same instructions and directions.

This system is so simple and easy that any novice can carry it out without difficulty, and can be applied to suit all bee-keepers irrespective of number or kind of hive.

I will give five different methods of wintering, viz: In Bee House; in Cellar; in Clamp; in Chaff or Sawdust Hives; in Boxes Packed.

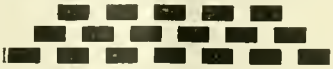
WINTERING IN BEE HOUSES.

To do this successfully it should be so constructed that the out-door temperature cannot affect that of the bee house; and, in order to accomplish this, its walls should be packed tightly with two feet of dry sawdust or three feet of chaff, packing overhead same thickness, and the bottom so protected that no frost can penetrate. Next, it should have a ventilating tube at the top, of not less than one square inch to each colony of bees. It should have sub-earth ventilation by means of a tube laid below the depth frost will penetrate, and from one to three hundred feet in length, coming in contact with the outside atmosphere at the other end; as air passes through this tube it is tempered by the distance through the earth, and comes into the house at an even temperature. By means of slides at these ventilators, the temperature can be arranged in the bee house, which should stand from 43° to 46°, and in no case should it fall lower than 42°. Now, if a bee house is constructed in this way it will not change its temperature more than from 1° to 3° during the winter, and can be regulated, as before stated, by means of ventilating slides. Have tight fitting triple doors, making two dead air spaces.

When the bee house is filled, and during warm weather in the spring, where a person does not want to set them out until the first pollen appears (which is generally from Tag Alder or Black Willow), it is necessary that the temperature of the room be kept at the wintering standpoint. This may be done by means of an ice-box or refrigerator, filled with ice or snow, and suspended at the top of the room in close proximity to the ceiling. The bottom of the box must be so constructed that while the warm air may be allowed to pass up through the refrigerator, the drippings will not drop to the floor and create a moisture. This latter may be prevented by means of a tube running from the box down through the floor.

PREPARATION.—All this must be done in the fall. They should be strong in stores, have plenty of young bees, and should be crowded up to have no more comb than they can cover, and these should be well stored with pollen and honey (say 20 to 30 lbs. of the latter). If you have not this quantity, feed granulated sugar and water (2 lbs. of the former to 1 lb. of the latter) brought to a boil and allowed to cool before feeding. This makes a good, and even better, feed than the best of honey, and should be fed in time for the bees to seal it over. Commence feeding about the 1st of September, or immediately after the first frost has killed the flowers. *No glucose should ever be fed.* Winter passages should be made through the combs, between which a space of half an inch should be left. During the last sunshining days in the fall remove the lid and cloth from the hive and allow the sun to shine in; this purifies and dries them. Then put on a cloth free from propolis; that same evening carry the bees carefully into the house, placing them on a bench 10 to 12 inches from the floor or ground; this keeps them out of the carbonic acid gas, which is given off by the bees in the hive, and which sinks to the lowest part of the bee house. The lids should be removed, and only a cloth or cushion of chaff or sawdust allowed to remain on the hive. Leave the entrance wide open.

When the first row has been placed on the platform, from 2 to 6 inches apart, take two strips 1 to 2 inches wide, and place on top at the rear and front of the hives, and upon these place another row, so that the spaces between the hives in the second row will come over the center of the hives in the first row, thus allowing a free circulation of air and the escape of the moisture. Thus—



Continue the above until all the hives are placed. Care should be taken to have the stronger colonies in the bottom rows.

Two thermometers should be placed in every house—one opposite the bottom and the other opposite the top row, the former indicating 43° and the latter 46°.

Keep the house perfectly dark and let them alone until you set them out in the spring, unless they show signs of dysentery by soiling the entrance of their hive, in which case take them out quietly on the first favorable day and give them a fly, taking care to replace the hive immediately after they have returned from their flight.

WINTERING IN CELLARS.

The preparation and management in the fall and throughout the winter is the same as is necessary in the bee house, but they must be placed at least two feet from the cellar bottom; keep the temperature the same as in the bee house.

Do not allow any decaying vegetables in the cellar with the bees. If they show signs of dysentery and the weather is fine, give them a flight, being sure to always put them on the same stand again after the first flight. Never leave them out over night, but put them back in the cellar after they return from their flight. Set out of the bee house and cellar the first favorable weather when pollen appears.

The hives must all be examined carefully when setting out, and only what combs the bees can cover must be left. Take care that plenty of stores are left in the hives, and have the bees crowded together as much as possibly by the use of the division board.

WINTERING IN CLAMPS.

Prepare the colonies the same as before. Make a platform six inches above the ground and wide enough to have from 10 to 12 inches of space in front of the hive, 12 to 15 inches at the rear of the hive, and a platform long enough to hold all your hives. After placing them 4 to 6 inches apart, if there is any space in the rear of division board, pack it with dry sawdust or chaff; remove the lids and put clean cloths on the frames, or, if a box hive or log gum, bore half a dozen inch holes in the top of the hive, and that covered with cloth allows moisture to pass up into the packing above. Place a stick, half an inch thick, each side of the entrance, long enough to reach the edge of the platform; upon these lay a board, by means of this there will be a communication with the outside at all times; then drive stakes at the front and rear of the platform, set up boards all around this platform inside the stakes of sufficient height to allow packing 18 inches above the hive, pack firmly with dry sawdust or chaff around and between the hives and about 18 inches on top, then lay boards on the top of the packing, upon these place stones or other heavy weights (100 lbs. on each hive is not too much). This will pack firmly and prevent heat from passing up through it from the inside of the hive and yet allow moisture to escape. The packing should not be removed until about fruit blossom, except slightly to examine condition of colonies.

This clamp should be banked outside sufficiently to prevent frost from getting under; if sawdust were packed under the clamp it would be better. A slanting roof keeps off rain and thawing snow.

WINTERING IN DRY GOODS BOXES.

Where parties have only a few colonies old dry-goods boxes may be taken, the bees placed in them and packed in a similar manner to a clamp, but there should always be 6 inches of dry packing under the hive, preventing frost from below. Care should be taken to make the entrance perfect, enabling them to have access to the outside, so that they may have a flight when the weather is favorable.

WINTERING IN CHAFF OR SAWDUST HIVES.

These hives are intended to winter safely without any outside packing, only requiring the same preparation as those for the bee house, viz., strong in bees, plenty of young, plenty of stores (if not sufficient, feed), crowd up on a few combs, cut a passage in the comb, the combs half an inch apart, and fill up the space in the rear of the division board with dry sawdust or chaff, filling the space, between the top of the frames and lid, with the large cushion.

Taking all seasons through, nothing pays better than a careful preparation of bees for winter, and I would caution people to beware and not expect this winter to be the same as last, as that was the best winter we have had for many years, and the indications are that the next may not be so favorable, and those who do not properly prepare will likely be found mourning over their empty hives in the spring. I sincerely hope that no one will have to repent their neglect in this matter when too late.

Beeton, Ont.

[We give the foregoing plans delineated by Mr. Jones, as there are so many inquires as to how he prepares his bees for winter.—Ed.]

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Southern World.

The Progress of Scientific Bee Culture.

C. R. MITCHELL.

The subject of bee-keeping has claimed the attention of many of our most learned men of ancient and of modern times, who looked upon it as a science worthy of their study and their philosophy. Gratwell, Schirach, and Huber the elder, were among those of antiquity who devoted their wisdom to the advancement of the knowledge of the habits and character of these insects, and to the latter especially, as every school-boy knows, we are indebted for much that is of inestimable value in the studies of the naturalist. Although he became blind at the early age of fifteen, his works gave an impulse to this branch of rural industry in Europe, which caused the management of bees in common hives to be brought to a high degree of perfection. Lombard, Radonan, Desormes and others, in the first part of the present century spread abroad this acquired knowledge and added to it the results of their own ingenious inventions, observations and experiments.

Debeauvoy, in 1844, invented his movable frame hive, but it was found to be too inconvenient for general use. Its merits were contradicted and its inventor ridiculed by all, until Mr. Bastain, a clergyman of Germany, published a work in which he gave proper credit to the movable frame of hives, and Mr. Sagot offered to the public an improved frame hive of his own construction. In spite of all opposition, this new system worked itself into the favor of many apiarian societies, and through them the movable frame hive began to be widely used with the recommendation of such learned men as M. M. Balsamo Crivelli, Visconti di Saliceto, Angelo Dubini and Major von Hrushka, at the head of the bee culture of Italy, and to the last named of whom we are indebted for the principle of the honey extractor.

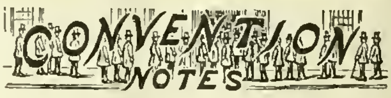
The improvements, inventions and discoveries made in Germany, in the last twenty years, are almost beyond number, and up to 1868 four hundred and twelve publications had been issued upon this subject. Notwithstanding the advances made by the countries of Europe in theoretical bee culture, none have excelled in the practical knowledge of the science the bee-keepers of our own grand commonwealth.

The theories of Dzierzon, the experiments of Berlepsch, and the precepts and examples of many of modern days have passed into our language and been given to us for our guidance and amelioration. What a vast difference to-day, even in our own land, from what was considered perfection in bee-keeping less than half a century ago, when to "let bees do as they have a mind to" was the orthodox philosophy of practice, and he who would experiment must suffer for his temerity.

A new field of enterprise opened up and bee-keepers and hive makers issued numerous patents, but none seemed to advance beyond a certain point until about 1850, Mr. Langstroth introduced his own ingeniously-constructed movable frames and their method of successful manipulation to the public mind. Perfection seemed almost attained; the interior of the bee hive need no longer remain a labyrinth of mysteries, and the assertions of the naturalist could be easily verified at every man's door. The golden-banded bees were imported from Italy, in the light of the new science, and the moth worm, the great bug-bear of inexperience, need no longer be feared as the destroyer. Under such favorable auspices as these, with numerous bee periodicals, modern conveniences and appliances, and gentle, industrious Italians, can it be supposed that bee culture could be other than a pleasant and profitable vocation, when properly and intelligently pursued?

You may search out a knowledge of the material, and stumble over the things which impede your progress, but if you adhere to the fogy notions of your ancestry and flatter yourself with the delusive hopes of abundant success, you will find a mountain of despair at almost every stride; while on the contrary, all obstacles fade with the fleetness of a shadow amid the progress and improvements of an enlightened age.

Bees in themselves have the same essential habits that were given to them when they first winged their flight in the Garden of Eden, as permanent and as unvarying as the attraction of gravitation, or the natural laws of our solar system. They act alike under like circumstances, are incapable of education and learn nothing. It is by taking advantage of these unchangeable habits, that we can control their actions and make them subservient to our purposes at our own good pleasure, just as we take advantage of the immutable laws of the universe and appropriate them to our own conveniences for scientific investigation, domestic manufactories and foreign commerce. Review the annals of bee culture for the past few years, and you will find yourself astonished beyond measure, at the advancement it has made as a science, at the reputation it has achieved as a remunerative employment, and at its present magnitude and importance as a leading industry among domestic pursuits.



Local Convention Directory.

1882. *Time and Place of Meeting.*

Nov. 1—New Jersey & Eastern, at New Brunswick. J. Hasbrouck, Sec., Bound Brook, N. J.

3.—Iowa Central, at Winterset, Iowa, Henry Wallace, Sec.

29-30, Western Michigan, at Grand, Rapids. Wm. M. S. Dodge, Sec.

1883.

Jan. 16.—Eastern N. Y., at Albany, N. Y. E. Quakenbush, Sec., Barnerville, N. Y.

11, Nebraska State, at Wahoo, Neb. Geo. M. Hawley, Sec.

16-18, Northeastern, at Syracuse, N. Y. G. W. House, Fayetteville, N. Y.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

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☞ The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning County, in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th.

Leonidas Carson, *Pres.*

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☞ The Nebraska State Bee-Keepers' Association, will hold its annual session in Wahoo, Saunders county, Neb., commencing Thursday, Jan. 11th, 1883. Arrangements have been made with the railroads to secure 1¼ fare for the round trip. The Saunders county Bee-Keepers' Association will furnish entertainment free to all visiting apiarists.

T. L. VonDorn, *Pres.*
Geo. M. Hawley, *Sec.*

Southern California Convention.

The following is the annual address delivered at the Southern California District Bee-Keepers' Association in Los Angeles City, Oct. 19, 1882, by Pres. J. E. Pleasants, who was re-elected president of the association:

Since last we met, another year has crossed the bridge of time and passed into the dark unknown. To some it has brought sorrow and to others joy. We should come to these annual gatherings, like workers to a hive, each one laden with the experience of another year. For whatever adds to our knowledge of the bees, and aids us in manipulating them, thereby increasing the quantity and quality of honey, is of great value. Therefore, an association which brings the bee-keepers together and imparts useful knowledge, causing them to advance in their avocation, is well worthy of encouragement; and those who are not willing to aid, should be classed as the lazy, yawning drones of the hive.

The bee season for 1882 cannot be called a success, but it is not as bad as it might have been. There has been fully one-fourth of a crop, with a fair increase of colonies, and the bees are now in excellent condition. The price of honey is better than it has been for years.

With "our mind's eye," let us take a retrospect of the bee business. In the year of 1875 we see a tidal wave, as it were, approaching. In 1878 it takes it to the highest point, where for a while it holds it tottering, for it is above its level. Then the wave recedes and it takes it down to the lowest depth, where it stays until 1880, when it slowly, but surely, commenced coming back to its true level.

This tidal wave, when it was going up, caused many mushrooms to engage in the bee business. These mushrooms crowded into every available place with a few colonies, expecting to make a fortune in a year or two, by increasing their bees at lightning speed; and they extracted, at the same rate, what they called honey, but it afterwards proved to be vinegar. When they started, they thought of revolutionizing the business; and so they did, by almost ruining the reputation of California honey.

The general supposition is that the drouth has injured the bee business. I would say not as much as the unscrupulous mushrooms. They are not worthy to handle

> "Creatures that by a rule in nature teach
> The act of order to a peopled kingdom."

Fortunately, for the honey interest, the mushrooms were so shaken up in the tidal wave, that they abandoned the business and "went to pastures new."

The apiarist well deserves to be called a benefactor to all mankind, for through his agency the bees utilize millions upon millions of flowers which would otherwise waste their sweetness in the mountain air. Let us gird ourselves anew, for we have good reasons for renewed enthusiasm in our calling. The future looks very promising. Let us pull every oar; "there is land ahead."

There are now no more fears of glutting the honey market; for the foreign demand is almost unlimited. We have for years been knocking at these foreign doors, but now that they are opened, it rests with us whether they shall remain so or not. We can here produce honey which is fit for the gods, and only such ought to be put upon the market.

There is a bright side to bee-keeping, even in a bad year. At the beginning of the winter our hopes are great; we expect plenty of rain and a large yield of honey; as the season advances, and no rain comes, we let ourselves down from a full crop to ½, then to ¼, then, if we can save the bees; by and by, if we can save the combs, and at last are well satisfied to save the hives. In the face of all the difficulties that the bee-business has had to contend with, I would say, that if it is properly managed, it is one of the most independent of pursuits.

Apiculture is advancing with rapid strides. The production of honey is now one of the great industries of California. The agricultural society could, if it would, aid this industry. It suffers neglect at their hands; for it is certainly worthy of a more prominent position upon their premium list, and I firmly believe we can get such a position if we strive for it.

I thank you for the honor of having been twice elected president of this association. To serve you faithfully, has been my most earnest desire. How far this has been accomplished, it is for you to judge. I hope that the time spent here will be agreeable and profitable to all.

Northern Ohio Convention.

The Northern Ohio Bee-Keepers' Association met in Norwalk, Ohio, Saturday, Oct. 21st, and was called to order at 10:30 a. m., with Samuel Fish, of Milan, President, in the chair.

The Secretary's report of the last meeting was read and adopted.

The President requested those present, who were not members, to join the Society, the gentlemen by signing the constitution and by-laws and paying a fee of fifty cents, and the ladies by signing the constitution and by-laws.

Eight new members were added: J. S. Terrell, North Ridgeville, Lorain county; O. J. Terrell, North Ridgeville, Lorain county; T. S. Johnson, Erie county; J. B. Darling, Hartland; E. Walker, Berlin Heights; J. S. Tilton, Norwalk; Mrs. M. J. Campbell, Steuben; Mrs. W. B. Harrison, Berlin Heights.

Mr. Fish said the season of 1882 had opened favorably for bee-keepers, and they were elated with hopes of obtaining large crops of honey, but it soon changed to a most unfavorable and unprofitable one. The cold and wet weather, which continued many weeks, not only prevented the bees from gathering any surplus of honey, but also from gathering sufficient for their own use, and many were obliged to feed as late as the 10th of June, to keep their bees from starving.

He next took up the subject of wintering. He remarked that Langstroth had said "that the time would come when bees would be wintered as successfully as horses or cattle," and that James Heddon, a prominent Michigan bee-keeper, claims that he can, by his system, winter with perfect success. He advised all who had not prepared their bees for winter, to do so as soon as possible. Two things were to be guarded against, dysentery and spring dwindling. Some advised, as a precaution against these two, so-called, diseases, to remove all combs from the hive, containing pollen. He had not followed such advice, and had always wintered successfully. One very important thing was to prevent an excess of moisture (the principal cause of dysentery). This could be done by regulating the temperature and using absorbents. Absorbents remove the moisture.

Mr. Fish closed his remarks by giving a description of the house he uses for wintering. It consists of two rooms adjoining each other. One contains his bees, and the other a stove to regulates the temperature.

Mr. E. F. Waldron being called on, said he did not depend on books, or the experience of others, but on his own experience. Three things were necessary for successful wintering; warmth, dryness and good ventilation. He prepared his bees for winter Oct. 20th; did not think bees could cluster in the small spaces contained between two combs as used in summer, and retain the proper degree of heat; removed a comb from the center of the hive and left the space vacant for the bees to cluster in; used chaff cushions above the cluster to absorb the moisture. By the use of a tube he admitted the cold air into the hive in such a way that it did not come directly in contact with his bees.

[When Mr. Waldron examines his hives next spring he will probably find one of two things to have happened. His bees will either fill the space from which he removed the comb, with a new comb, or will all cluster on one side of the space.—*Secretary.*]

Mr. Bartow gave a description of his method of protection. He encloses the summer hive in a box three or four inches larger each way, and fills the space with leaves. Also packs leaves over the cluster. Would wait until after frost comes before he packed his bees for winter, and would not remove the packing until the weather became quite warm.

Mr. Boardman asked Mr. Fish how he knew an excess of moisture caused dysentery. Mr. Fish replied that with moisture in excess bees died with dysentery, without it they did not.

S. F. Newman said that to winter bees successfully several things must be attended to at the proper time. Each colony should have, as early as the 1st of August, a young and prolific queen, because young queens lay much later than old ones, and thus the colony is provided with a large stock of young bees; a very important factor in successful wintering. All preparation for wintering should be finished not later than October 1st, and it probably would be better not to disturb bees after the middle of September, for by that time they have begun to place their food where it will be easy of access, and if the weather is cool, form themselves into a compact cluster, which should not be broken afterwards.

Each colony should have at least 20 lbs. of sealed honey, and each space between the combs which contains bees, should contain enough honey for the bees clustered in that space to feed upon, for the less they are compelled to move about the hive to obtain food, and the quieter they keep, the less likely they will be to become diseased. Absorbents of some kind should be used above the cluster, for if the hive becomes damp and the combs mouldy, the colony cannot be healthy. The entrance of the hive should be large enough to give an abundance of pure air.

By following these directions, bees can be wintered in suitable bee-houses or dry cellars, or on their summer stands in chaff hives, with but little loss.

Mr. Albright said he had wintered out doors for six or seven years. Hives were not protected except by his house and a fence. Lost only one colony during the winter of 1881-2. Used the American hive.

Mr. Walker winters out doors. Does not like chaff hives. Would not give a cent for a cart-load of them. Uses a dead air space instead of chaff. Says chaff conducts moisture. Wintered in chaff hives in 1880 and 1881, and lost 34 out of 41. Left a sheet of oilcloth between the cluster of bees and the chaff cushion. Uses only seven frames in brood chamber.

C. H. Hoyt said that several years ago he wintered in clamps with ventilation, and was successful. The year following he wintered in a damp cellar without loss. He was now using chaff hives, and preferred them to any other.

Mr. Boardman did not think bees could be wintered with as much certainty as horses and cattle. If they could, the business would be very profitable. There was no difficulty in getting old bees through the winter alive, but they died in the spring before there were young bees enough hatched to perpetuate a colony. He winters in a frost-proof house, without absorbents, without bottom boards, and with but very little upward ventilation.

Mr. Boardman thinks the moisture which collects in the hives is not produced by the breath of the bees, but by the cold air coming into the hive from the outside and mixing with the warm air inside, and that this moisture is utilized by the bees for drink. Prefers in-door wintering, on account of the less amount of stores consumed. Did not think sub-earth ventilation as good as a room containing a stove adjoining the winter bee house.

J. S. Terrel winters in Simplicity hive, with only a piece of cotton cloth over the brood nest. Removes one comb and equalizes the space left. Intends to winter in a clamp the coming winter. Had fed liquid food in the winter time, when bees could not fly, without any bad result.

J. B. Darling said that he found no difficulty in wintering, but could not obtain any surplus honey, and would like to have some one tell him how to get it. He said he knew as much about bees now as he did twenty years ago, and no more.

The Secretary gave the following statistics, using numbers in place of the names of those persons making the reports:

STATISTICAL TABLE.

Apiarist, No.	Number of Colonies June 1, 1882.	Number of Colonies Sept. 20, 1882.	Comb Honey, pounds, 1882.	Extracted Honey, pounds, 1882.	Pounds of Wax obtained.
1	21	39	400	325	20
2	9	14	150	75	..
3	18	25	200	75	..
4	80	120	700	8000	75
5	70	91	1800	500	50
6	70	90	1350	1200	20
7	40	50	400	400	5
8	2	3	6	....	..
9	12	24	200	....	..
10	8	17	100	....	..
11	236	242	7000	500	25
12	8	15	300	....	..
13	6	20	25	....	..
14	26	26	404½	542½	10
15	2	2	....	....	..
16	39	46	3000	1000	..
17	11	25	75	240	..
18	235	280	1950	4520	40
19	5	6	87	12	..
20	300	390	1000	7920	60
21	14	25	125	600	30
22	3	3	75	....	..
23	22	50	112	1400	25
24	9	13	400	...	..
25	6	15	200	150	10
26	22	36	400	70	..
27	6	16	59	816	6
28	8	11	300	10	..
29	32	60	1500	500	10
30	20	25	500	....	..
31	22	48	100	....	..
32	9	12	50	50	..
33	27	47	700	100	..
34	42	63	1200	300	..
35	15	25	400	600	10

The table shows that 35 bee-keepers owned, June 1st, 1882, 1,453 colonies, which increased to 1,973 by Sept. 20th, 1882. These colonies gathered 55,099 pounds of honey, which was an average of about 28 pounds to the colony. The honey is worth about $10,000, and the wax produced $100.

After a vote of thanks to the Whittlesey Association for the use of Whittlesey Hall, the meeting adjourned to meet again the first Saturday in February, 1883.

Read before the Union, Ky., Convention.

Inter-Breeding of Bees.

DR. W. M. ROGERS.

The laws regulating the inter-breeding of bees have received too little attention from Apiculturists. With reference to the relations of characteristics, to any system of breeding or crossing, we are nearly ignorant. But little of the knowledge contained in works upon the honey-bee, refer to principles of breeding, or is susceptible of arrangement upon a line of law pertaining thereto. In a first effort at developing a science, one may be pardoned for venturing upon hypothesis. With greater light a theory may be promulged. From accumulated and convergent facts law is educed. With law clearly in sight, all factors are reduced to order, and sequences are definite. We shall probably die without the accomplishment—scientific precision in breeding bees. With the conviction that *all breeding* is arranged upon a line of law, I am hopeful that the future has much of interest and profit in store for us, arising out of correct interpretation of the phenomenal pertaining to the breeding, inter-breeding and crossing of bees.

Nature works upon a wider range of correlations than we might expect to find. Comparative anatomy makes us wonderfully near the animals below us.

Corresponding devices *always implying intelligence* are found everywhere about us, in applications of widest range. The device of an umbilical cord, serves a purpose alike for the horse chesnut and the man who aspires to know God or dares to deny Him.

The beautiful modifications of the feather serve the purpose of the swan upon the lake; the swallow that cleaves the air—the gay butterfly that flaunts her colors in the sunlight—the pretty moth that glints the moonbeams, or the industrious honey-bee with corsage of gold. I hope for much yet to be revealed from the wide and illimitable infinitude of intelligent correlations inhering in the coordinations of all nature. The pathway of intelligence is marked. The thought of the Mighty One is feebly followed by the thought of the tiny mould of his image. I have studied this subject until I have discovered my own ignorance and am grown curious to learn. I think I could hardly breed a flock of Cotswolds or of Southdowns, without some effort to discover the possibilities of modification of character inhering in them under differences in breeding and mating. I am satisfied that Bakewell had a law of breeding applicable to sheep—and that any man to-day could, with a knowledge of that law, take the same character of material and arrive at the same results essentially.

Returning to the immediate subject of this paper I express the opinion that the introduction of the new races of bees into America, affords opportunity for advance in discovery of the susceptibility of bees under the various conditions of mating. In the American Bee Journal of Sept. 27th, 1882, the editor in reply to a question, answers: "If Italian queens are mated to black drones, they (*the bees*) are much more irascible than the pure blacks; if black queens mate with Italian drones, then the traits of disposition are most likely to be reversed." This statement has, I believe been asserted in substance by others. Accepting it as a fact and remembering that black bees are more irascible than Italians, we may fairly draw the inference that where these races are intermated, the drones participating in the inter-breeding, subordinate the cross in nervous character. This should be accepted as a rule, modified by exceptions that confirm the rule. From experiments conducted with whatever care and discrimination I am able to bring to the work, I have proved to my satisfaction that it is practicable to breed from Italian queens, mated to Cyprian drones, a progeny that resembles, in characteristics, pure Cyprians. The first and second generations from such matings are liable to sport. Italian queens bred to Cyprian drones do not produce the same results in royal progeny, as we secure from Cyprian queens bred to Italian drones. We are not to presume, therefore, that mere equivalents in blood will produce the same characteristics in bees, else a Cyprian queen mated to an Italian drone, and conversely, an Italian queen mated to a Cyprian drone, each producing half and half from the two races, should throw queens alike, which is not the fact. My experiments in 1881 and 1882, incline me to think that in mating between Cyprians and Italians, the drones are prepotent. In a letter just received from Mr. H. Alley, he re-affirms his oft-repeated statement of opinion to the same effect.

In order to correct results it will be necessary to conduct experiments with pure races. Pure blacks and Cyprians would afford excellent subjects. The most useful material results would probably be reached in inter-breeding Italians and Cyprians. The same assurances of correct matings could be had in these experiments, that we have in breeding Italians or Cyprians in purity, accepting the theory of parthenogenesis. I consider the blood of all drones as derived from the matings of their grand dams. Hence, when the queens are half and half of the two races, the drones would be pure bloods of the line of the queen, and when in process of breeding the drones are half and half of the blood of the race participating, the bees and queen progeny would be three-fourths bloods, if the order of the matings has been continuous. Consideration of these facts is essential to definite results in inter-breeding bees. I do not ignore the influence of climate, isolation, food and natural selection. As factors in breeding, all should be considered. These alone did not make Bakewell's sheep, nor the shorthorn cattle, nor the Essex pig. A sire of prepotencies is not an accident. In order to be improved, a race must offer in itself the suggestion of the possibilities of its future. In other words, we do not create, but we evolve a character already inherent in the subject. More than this we may not hope to accomplish.

A cross and its inversion may differ widely in useful characteristics. A familiar illustration is found in the mule, an animal of great hardihood usefulness, and the invoise Hinny, a product so useless as to be rarely seen. In crosses, the strongest tendencies are back toward the pure blood of either parent, rather than a balanced result of the inter-breeding. Hence variations are quickly merged into the original type if bred into line. Hope of success in inter-breeding bees may be drawn from the fact of their near alliance with each other, and the consequent plasticity of the races relatively. No process of breeding, more certainly develops primordial characteristic than that of crossing. The significance of a cross may antedate all history, leaping a chasm of centuries of time.

The Italian queen from which my experiments were made this year, was sent me as a tested one by a breeder of assured integrity, yet such was the tendency to sports in the second generation of queens bred from her, that I at first hesitated in the belief of her purity, but reflecting that the Italian is a continental race, and that the Cyprian is of insular breeding, I conclude that this is precisely the development that should be anticipated. The sporting in color has been upon varied shades of mingled chestnut and yellow. The queens that I have seen from Cyprians bred to Italian drones have been uniformly marked, showing the prepotency and purity of the Cyprian relatively. Queens bred from the Italian, being of the second generation mated to Cyprian drones were prolific and gentle. The first crosses of bees are as a class active, prolific, hardy and industrious. Formerly, I was inclined to find a reason for this in the idea that the strongest and most energetic queens would seek their matings at greatest distances of flight from their homes, and I yet ascribe importance to that view, but the analogies point to the conclusion that the result arises mainly from crossing. Flowers show undoubted co-aptation to pollen brought from other individuals of the same race, and hence, perhaps, the conclusion among botanists that the pollen or male principle is prepotent with flowers. It should not be forgotten that hybrids may lose their qualities as easily as pure races when too closely inter-bred. In view of the foregoing, I accept it as a theoretical proposition that a race of bees should be sustained by new blood. Since among bees, the queen submits the question of the survival of the fittest to the wager of battle, and since the queen gives character largely to her progeny, I submit the hypothesis, that when a race of bees produce queen-cells in large numbers, this handing over to the best fighter among many the possession of the colony, the race itself, may reasonably be expected to afford staunch defenders of their rights. I have counted 75 perfected queen-cells in a single colony of Cyprians, formed under natural impulse. It would be irrational to deny to the survivor of 75 queens in battle, her well-earned laurels.

I close this paper with an apt quotation from an article by Sir J. Lubbock, "on certain relations between plants and insects." He says: "I venture to think the evidence now brought forward, however imperfectly, is at least sufficient to justify the conclusion that there is not a hair, or a line, not a spot, or a color, for which there is not a reason, which has not a purpose or a meaning in the economy of nature."

Shelbyville, Ky.

Utah Bee-Keepers' Convention.

The Utah bee-keepers' assembled at Salt Lake City, on Oct. 5, at 7 p. m. Pres. A. M. Musser in the chair.

Tooele county was represented by Secretary T. W. Lee, who said that in Tooele City they started with 65 colonies of bees this spring. Their increase had been 96 swarms, making a total of 161 colonies at this time in good condition for winter. The honey season had been fair this year. They had extracted 3,060 pounds of honey, and taken considerable comb honey. Swarming commenced on the 28th of May. Some of our bee-keepers allowed natural swarming, while others divided for increase. They had no foul brood. In Grantsville there was no organization, but would like a branch association there. They were pleased with the profitable enterprise and would try and give a better report next meeting.

Vice President Samuel McKay put into winter quarters 76 colonies of bees, in good condition, and, when the very late spring set in, he had only 15 colonies left and some of them in a very weak condition. He had nursed and cared for them this summer, and had them back nearly to their former number, having his hives well stocked with combs and honey, facilitating very much his increase, but he had not taken much honey this year. Some of his hives now had 90 lbs. of honey in them. From the best information he could gain, about 90 per cent. of the bees had died in Salt Lake county. The sudden changes of last winter and the late spring, he thought was the cause of so many losses, Mr. Murphy, of Mill Creek, had lost 100 colonies out of 107. Mr. Bailey also had lost nearly all of his bees at the same place. Mr. Woodruff lost his entire stock of over 20 colonies; also John and Edward Morgan, of Mill Creek, lost all of their colonies. W. A. O. Smoot, of Sugar House Ward, lost 40 colonies. The loss to Mr. Murphy alone would be, counting his colonies at $12 each, $1,200.

A question, by Secretary Lee, was asked: Could a September swarm of bees be successfully wintered if furnished with young brood and honey?

Edward Stevenson said that two years ago, late in September, he captured a stray swarm and gave them to one of his small boys. The night he hived them was so frosty that a few straggling bees around the hive perished. Some young brood and honey was given them, and now there were 4 good colonies, and surplus this year.

Geo. Luff, of this city, had 17 colonies last fall, 10 this spring; 4 died during the late spring; has 9 now, and had taken 100 lbs. of honey this season.

Bishop Madson, said there were 20 colonies of bees in that place, all in good condition. The inspector of Manti had visited and pronounced their bees healthy. Did not know how much honey was taken.

Edward Stevenson, of this county, said his experience in the mortality of bees, during the past winter and spring, excelled any previous year, in this county, but he could not agree with Mr. McKay, of 90 per cent. being the average loss, but thought 50 per cent. would cover it. In East Mill Creek 5 colonies of his bees wintered on a plank close to the ground, the snow drifted against them and remained in that condition until late in the spring, and while other bees, exposed to the warm rays of the sun, would often fly out, and the cool air and snow on the ground caused them by thousands to chill and fall into the snow, thus depleting the colonies, so that the late spring and cool frosty nights either caused them to dwindle away so that they could not gather honey from fruit bloom, and entirely perished, as hundreds of colonies did, but those 5 colonies imprisoned, could not waste away, and, consequently, were strong, and able to gather supplies from fruit bloom and other blossoms. They increased to 15 this season. Some of them are in two-story hives, and now have 100 lbs. of honey each; 2 colonies have gathered 300 or 400 lbs of honey this season, from the five thus wintered.

Bishop Bills, of South Jordan, wintered quite a number of colonies of bees, surrounded by chaff, in long boxes, removing to tops of the hives, placing cloths over them, and then chaff, keeping them mouse-proof. So that the warm rays of the sun could not affect them until it was sufficiently warm for them to fly and return home again. He lost none during the winter.

Pres. Musser said that the bee industry should be interesting and kept alive. It paid a better per cent. than farming, and other industries, when intelligently managed. Honey has medicinal properties and is healthy, as well as a luxury. Thought it would be well to have blanks to be filled as reports from branch associations. Said some considered the smoke from the numerous smelters in this city detrimental to apiculturists.

E. Stevenson moved that a committee be appointed from this meeting to get up blanks to be sent to branch associations, to be filled up and returned, to facilitate general reports from the various counties of our Territory. The motion was carried. Edward Stevenson and Wm. Egan were appointed as that committee. The convention adjourned until next April 5th. Benediction by Mr. Thos. Lee. E. STEVENSON, *Sec.*

SELECTIONS FROM OUR LETTER BOX

The Sweet Clover Still in Bloom.—On Nov. 1st, 1881, I sent you a few sprigs of sweet clover. I now send you another bunch, picked in an open field to-day, it is just as sweet and fresh now as then. This clover has been in blossom continuously since about July 1, and the bees have visited it whenever the weather was favorable. The past season was a very good one, yet I fully believe that 10 acres of sweet clover would have been worth $500 to me. I shall sow several acres next spring. I have been experimenting with a number of honey plants, for several years, but find nothing equal to sweet clover.

C. H. DIBBERN.

Milan, Ills., Nov. 1st, 1882.

[It is indeed of "sweet-smelling savor" and shows its value as a honey plant—blooming till long after the weather will allow the bees to fly.—ED.]

Cowardly Bees.—I have one colony of bees that will not defend themselves against invaders. They have a good queen, and are strong in numbers, with plenty of stores. I have tried everything I have read or heard of, to induce them to have more spirit, but all to no purpose. If I cannot find some effectual remedy soon, I shall resort to brimstone. Who can give me a prescription?

W. D. SMYSER.

Nineveh, Ind., Oct. 27, 1882.

One Hundred Pounds of Honey per Colony.—I am not able to make a complete report for the past season, for I have not taken off all my surplus honey yet; but enough to show that I shall obtain 100 lbs. to the colony, spring count. We have had the heaviest honey flow ever known in this section. I shall put into winter quarters about 40 colonies. I had 20 in the spring. I wish to build a "honey house" and shop, combined, in the spring, and would like for someone to give a good plan, dimensions, etc., in the AMERICAN BEE JOURNAL, at an early day.

W. H. GRAVES.

Duncan, Ill., Oct. 25, 1882.

Chilled Brood and Robbing. — I started, spring count, with 2 strong and 1 weak colonies, and bought of Mr. Robertson, of Pewamo, 1 fine colony and 4 tested queens. One of the queens died soon after being introduced, through a very cold spell which we had about the first of June; the other three queens did well. I only increased from 4 to 7, and from these I took only 70 lbs. of extracted honey, from frames having no brood. White clover was a poor crop; basswood gave nothing, on account of wet weather. In the early fall I had 5 strong and 2 good colonies, with plenty of stores, and had serious intentions of dividing 3 of them. I noticed the brood was not hatching out; it appeared chilled (no bad smell from it). I had one thickness of burlap over the frames, and at once put two and three thickness more on; still the brood did not hatch, though the weather was very fine and warm. Some of the young bees could only get their heads out, and then die. The bees, of course, commenced to dwindle; they had plenty of stores, on an average, on which to winter. I commenced feeding granulated sugar, 8 lbs. to 6 lbs. of water, in syrup, taking care while boiling not to scorch or burn. I fed from 12 to 20 lbs. per hive, as I thought they needed it. To cap all, while in Toronto, Sunday, Oct. 22, my bees commenced robbing and on Monday I had the remnants of 3 colonies. I put these together and now have a moderate one, with plenty of stores. Can you give me any idea of all this trouble, particularly the cause of the brood not hatching? I use frames 18x10x1. My hives are double, with 2 inches of a space all round, some of them packed with leaves.

S. G. HOLLEY.

New Hamburg, Ont., Oct. 57, 1882.

[Your colonies were evidently weak. From some cause or other there must have been a loss of old bees, until there were too few of them to take care of the brood, and so it became "chilled," resulting in still more weakening the colonies—no young bees to take the place of those dying from old age or other causes. Still more proof for this theory is found in the fact that they were unable to protect themselves from the robbers. Weak colonies are an easy prey, and very often such will incite the bees to excessive robbing.—ED.]

Peppermint to Prevent Stings.—Has any one used peppermint, rubbed on their hands, while handling bees? I have used it, and very rarely do I get stung. We now have a good spell of weather after the snow storm. Bees are out briskly. We have a plant that is called skunk weed, that bees even go miles to work upon, in the fall. It seems to grow best on our country roads. I do not know of but one plant growing in a garden in this city. I saw a few plants the other day, and bees were working on them, although they did not appear to have any honey about them. I will send you a sprig of them when I go out in the country again. I send you a report of the bee convention held in Salt Lake City, on the 5th inst.; 3,060 lbs. is not all the honey that should be reported from this city: two of our largest bee men did not report; 1,000 lbs. is the largest yield from one apiary. Thanks to Mr. Heddon for his article on the easy way of wintering bees, on page 659 of the AMERICAN BEE JOURNAL.

JOHN DUNN.

Tooele City, Utah, Oct. 26, 1882.

Bees in Clamps.—Please inform me, through the BEE JOURNAL, of the best method of storing bees in clamps. When should they be put into the clamps? When should they be taken out, in the spring? How would thaws affect them in clamps?
A SUBSCRIBER.

[Our subscriber will find his queries answered in Mr. Jones' article on Wintering Bees, found on pages 709 and 710 of this paper.—ED.]

Sweet Clover yet alive with Bees.—W. S. Bair, of Rollersville, O., gives such a good report in the BEE JOURNAL for Oct. 4th, of the success of his plan of tiering up with his large hive, that as I use a hive having the same size frames, I intend to give it a trial, with one hive, next spring, I would like him to tell whether the entrance in the upper as well as the lower hive is to be left open, also, if he waits till the honey season is over to extract from the lower story. Also, whether he finds brood in both stories or only in the upper one?

Do the roots of cleome, which has flowered this summer, live through the winter and grow up again next year? I am much pleased with it as a honey plant, though it does not continue in bloom as long as either melilot or mignonette, still it is very good, especially for Italian bees, which work on it from day light till dark all the time it is in bloom, which is for many weeks. Melilot and mignonette are still in full flower, and alive with bees every fine day, which is more than can be said for any other honey plants that I know of.
H. F. BULLER.
Campbellford, Ont., Oct, 19, 1882.

[Cleome is a biennial, blooming the second year after being planted, and reseeds itself. It may be sown either broadcast or in drills; if the latter, let the drills be 30 inches apart, with plants about every six inches.—ED.]

Entrance regulating Bottom Board.—I send you, by to-day's mail, a rough model of the bottom board I use. It will show for itself, without explanation. further than that the hives will fit anywhere, top or bottom. You can give it to the readers of the BEE JOURNAL, if you think it worthy.
F. M. JOHNSON.
Greystone, Ct., Oct. 4, 1882.

[It is a loose, bottom board, with a portion cut out in front to regulate the entrance. Such an entrance-regulating bottom board has been illustrated several times in the BEE JOURNAL. It has some advantages, but there are many objections to using it, and we think the latter will more than counterbalance the former.—ED.]

Planting Basswood Trees.—The BEE JOURNAL makes a welcome visit to our home each Wednesday. I commenced this spring with one colony of bees, in a box hive, transferred them to the Mitchell hive, and have increased to four good strong colonies, besides taking 80 lbs. of comb honey. My bees are blacks, and I have used no foundation. Can you inform me how to raise basswood trees from the seed?
HERBERT LUTHER.
Lemont, Ill., Oct. 26, 1882.

[It is hardy and grows readily from the seed. I had been known to bloom and secrete honey in six years after planting. The seeds should be sown in drills, and cultivated for a year, and then should be transplanted, leaving them from 10 to 14 feet apart each way. Yearlings transplanted from the bottom lands are very desirable.—ED.]

Troublesome Mice.—Is it better to take off the tops of the bee hives during winter? I have cushions on, would the tops left on, with cushions, cause dampness? If the tops were left off, would wire screen on top of the frames, with cushion on top, do any harm? The wire seive on is to exclude mice, when I leave off the top. I winter in bee hives.
GEO. KEMP.

[Yes; the tops should be taken off; wire cloth over the frames, to keep out mice, will do no harm.—ED.]

Will it pay to use Sections.—I commenced with 24 colonies last spring; increased to 48, by natural swarming. My bees are black bees. I took off 2,500 lbs. of comb honey in 3½ lb. boxes. I had not the means to obtain sections. I sold at home for 15 cents per pound. I am satisfied that I should do better if it had been in sections. Preparing the hives for sections will cost quite a little. I lost a good deal by tramps, say 70 lbs. Last year it amounted to 50 lbs. I thought of making a high board fence, eight feet high; would it hinder the bees from coming home with their loads of honey? I want to move my bees 20 rods. Had I better do it this fall or next sprinf?
JOSEPH LEE.
Farmers', Mich.

[Certainly, it will pay to get honey in sections instead of the old-fashioned boxes, no matter what it may cost to alter over the hives. A board fence will be no particular detriment to the bees, if the apiary is not too contracted. You can move the bees now without materially injuring them, just as well as you could in the spring.—ED.]

Honey Crop for 1882.—Jack Frost closed the honey season with me on Sept. 21. My honey crop amounts to 3,077 lbs. from 20 colonies in the spring. I increased them, by natural swarming and dividing, to 40 colonies. They all have sufficient to winter on, of good capped honey. I have packed them on the summer stands. I sell all my honey in my home market—comb at 20 cents, and extracted at 15 cents. Young white clover never looked better at this time of the year.
R. M. OSBORN.
Kane, Ill., Oct. 27, 1882.

My first Experience.—I commenced this spring with eight black and two hybrid colonies of bees. In May I procured three dollar queens of Dr. Brown, of Georgia, which proved to be as good as any I want; one was a Cyprian and the other two Italians. They are in good condition for winter. I use the Langstroth hive.
Casey, Ill. D. R. ROSEBROUGH.

Sundry Questions.—My queen ceased laying Sept. 25, I presume on account of the cool weather. Upon examining the colony since placing it in winter quarters (which is a large box filled with sawdust) the queen has commenced laying anew and some of the brood is capped over. 1. Is it the increased warmth occasioned by the packing that causes that? 2. Is this late breeding desirable? The bees are bringing in a very little pollen, but scarcely any honey. I fed them honey comb Sept. 15 from another colony; 3. Will they consume this in breeding? 4. I have one comb of unsealed honey. Will this keep until spring or must I feed it now? 5. Will a full comb of pollen keep until spring? 6. Are bees attracted by cheese?
ROLLAND McDONALD.
Montreal, Canada, Oct. 18, 1882.

[1. It is.

2. No; it is too late.

3. They will, if they need it.

4. You can extract it, if the bees do not require it.

5. Yes.

6. Not that we are aware of.—ED.]

Candied Honey.—How shall I get candied honey out of a barrel, to put it into cans? What tools are necessary to do it?
F. MINNICH.
North Freedom, Wis., Nov. 2, 1882.

[The best way is to fill the pails while it is liquid and let it candy after being put into the pails. It can, however, be dug out with a strong hand scoop, or a wide knife, but it is a very slow and tedious job.—ED.]

☞ The Western Michigan Bee-Keepers' Association will meet at Supervisors' Hall, in the city of Grand Rapids, on Wednesday and Thursday, Nov. 29th and 30th, 1882. The co-operation of all bee-keepers of this section is desired.
WM. M. S. DODGE, *Sec.*

☞ The New York Weekly *Tribune* says in regard to the Noyes Dictionary Holder, manufactured by L. W. Noyes, 99 West Monroe St., Chicago: "We know of but one satisfactory Holder; that, however, is so good that a second is not needed." Mr. Noyes sends to all applicants a handsome illustrated circular. Prices reduced.

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◆

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For a Club of **2**,—"Bees and Honey," in paper.
" " **3**,—an Emerson Binder, or "Bees and Honey," in cloth.
" " **4**,—Apiary Register for 50 Colonies, or Cook's Manual, paper.
" " **5**,—Cook's Manual in cloth, or the Apiary Register for 100 Colonies
" " **6**,—Weekly Bee Journal for 1 year, or Apiary Register for 200 Col's.

Two subscribers for the Monthly will count the same as one for the Weekly, when getting up clubs for the above premiums.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies	(120 pages)	$1 00
" 100 colonies	(220 pages)	1 50
" 200 colonies	(420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞ Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

◆

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

Kendall's Spavin Cure is used from the Atlantic to the Pacific coast.

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 60
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A.G.Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 6 above-named papers	6 00..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

The Monthly **Bee Journal** and any of the above, $1 less than the figures in the last column.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

◆

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

☞ Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., November 8, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The supply of extracted honey is fully up to the demand. My quotations are: 6½c. for dark and 9c. for light, delivered here.

BEESWAX—It is quite scarce. I am paying 27c. for good yellow wax, on arrival; dark and off colors, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 16@20c. on arrival; extracted, 7@10c. BEESWAX—Firm at 20@25c. per lb. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand increases with the cool weather, but not sufficiently fast to keep pace with receipts, which now accumulate, as it is time to get the surplus into market. Prices remain unchanged with perhaps a tendency downward, owing to many consignors desiring to realize quickly.

We quote: white comb, in small sections, 18@20c. Fine, well-filled, 1 lb. sections bring the outside price. Dark comb honey, little demand, 15@16c. Light honey, in larger boxes, 12@16c. Extracted—white clover, 9½@10c.; dark, 8@9c., in barrels and half-barrels. Kegs will bring but a small advance, if any, above half-barrels.

BEESWAX—Very scarce. Choice Yellow, 30c.; dark to fair, 20@24c.

R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—Market is quiet, and for strictly choice prices are firm. Medium and dark qualities are not in special request. For a lot of fair comb, unbroken, 13c. is the best offer made, 15c. asked.

White comb, 18@20c; dark to good, 12@15c; extracted, choice to extra white, 9@10c.; dark and candied, 7½@8½c.

BEESWAX—We quote 25@27½c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Plentiful and slow. We quote, in lots, comb at 15@18c; strained at 6@7c.; extracted at 9@10c.

BEESWAX—Prime bright quotable at 27c.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—In sections, has been in extraordinary demand this week, at full prices. Sales have been quite up to receipts, and all lots except recent arrivals were closed out. One pound sections of best white sells for 21@22c. per pound, in attractive packages. Same quality, in less attractive shape, 20@21c. In 1¼@2 lb. sections, best quality, 19@20c. Second grade sells about 1@2 cents ₩ lb. less. Buckwheat is unsalable. Extracted, in small packages, pails and tin cans sells pretty well at 14@15c.; but extracted, in barrels, is very dull at 10@11c.

BEESWAX—Prime quality, 25@28c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is a fair supply of honey scattered around, but the movement is as yet rather moderate, though prices held steady, with fancy white clover in boxes occasionally exceeding quotations slightly.

We quote: White clover, fancy, small boxes, 19@20c; white clover, fair to good, 16@18c. Buckwheat, 13@16c.

BEESWAX—There is only a moderate demand for wax, but the supply is small and generally under control, and held firmly at 29@31c, according to quality.

Western, pure, 29@30c; Southern, pure, 30@31c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Sells very readily in 1 lb. sections at 22@25c. for best white, and 20@22c. for 1½ to 2 lb. Boxes containing ½ pound, 30 c. per pound. Extracted is selling very slowly at 12@14c.

BEESWAX—25@26c.

CROCKER & BLAKE, 57 Chatham Street.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly is now permanently established, and will be continued as heretofore.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

Every lady should send 25 cents to Strawbridge & Clothier, Philadelphia, and receive their *Fashion Quarterly* for six months. 1,000 illustrations and four pages new music each issue.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

IMPORTANT TO BEE-KEEPERS!

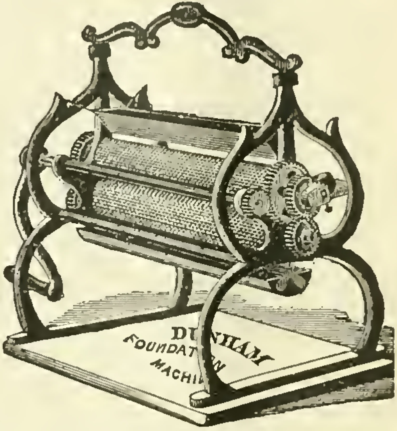
TWENTY-THREE years' experience in rearing queen bees. The cheapest, easiest and best way to raise queens. Never before published. Something new. Send for Circular.
44w2t HENRY ALLEY, Wenham, Mass.

LANGSTROTH AND SIMPLICITY CHAFF HIVES, with movable upper story, section boxes, metal-cornered brood frames, wide Langstroth frames and comb foundation. Send for Price List. A. B. MILLER & SON,
44wtf Wakarusa, Elkhart Co., Ind.

LIVE BEE-KEEPERS WANTED,

to introduce the new lime cushion, the only protection yet discovered that will carry the bees safely through winter and spring without fail. Send $50, for right to retail this cushion in your county, or send $5 for one apiary right to patentee.
F. DELLA TORRE,
Reistertown, Baltimore co., Md.
Remit by registered letter or P. O. order.
Patented April 25, 1882. No. 254,932. 45w13t

FRANCES DUNHAM,
Inventor and Sole Manufacturer of
THE DUNHAM



FOUNDATION MACHINE.
Patented Aug. 23d, 1881.
☞ Send for New Circular for January, 1882.

CAUTION.

Having obtained LETTERS PATENT Number 246,099 for Dunham Foundation Machine, making comb foundation with base of cells of natural shape, and side-walls brought up to form an even surface: also on the foundation made on said machine, I hereby give notice to all parties infringing my rights, either by manufacturing said machines or foundation, as well as to all parties purchasing machines as above, other than of my manufacture, that I am prepared to protect my rights, and shall prosecute all infringements to the full extent of the law. FRANCES A. DUNHAM,
23m4t DePere, Wis.

MUNN
&Co
PATENTS
ESTABLISHED 1846
NEW YORK

We continue to act as solicitors for patents, caveats, trade-marks, copyrights, etc., for the United States, and to obtain patents in Canada, England, France, Germany, and all other countries.

Thirty-six years' practice. No charge for examination of models or drawings. Advice by mail free.

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HALBERT E. PAINE, STORY B. LADD.
late Com'r of Patents.

PAINE & LADD,
Solicitors of Patents and Atty's in Patent Cases.
29w13t WASHINGTON, D. C.

New Kegs

FOR HONEY.

In order to satisfy the demand for small packages for Extracted Honey, I have heretofore procured kegs intended for syrup, fish, lard, etc., and in view of this growing trade, I now feel justified in having made to order a **Special Keg**

Designed Expressly for Honey.

These I am obliged to buy in large quantities in order to supply them at popular prices, and procure a package not used for any other purpose. They are made of Norway Pine, and have from 7 to 9 chine hoops on each end.

I have tested a sample keg by filling it DRY with white clover honey, and without the heads being painted.

It neither leaks nor flavors the Honey.

It is not necessary to paint the heads, but when painted I will guarantee them not to leak, and if well scalded, the pine **will not flavor the honey.**

Capacity, 175 pounds........Price, 80c. each.

The 5 and 10 gallon kegs will be sold, as heretofore, at 40c. and 55c. each, respectively.

ALFRED H. NEWMAN,
923 West Madison Street, CHICAGO, ILL.

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

—"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens	$1; Tested	$2
Cyprian Queens	$1; Tested	$2
Palestine Queens	$1; Tested	$2

Extra Queens, for swarming season, ready, if we are timely notified.

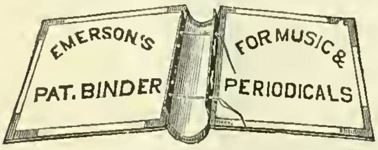
One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1wly.

BIND YOUR JOURNALS

AND KEEP THEM

NEAT AND CLEAN.



The Emerson Binder

IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Monthly Bee Journal..............**50c.**
For Weekly Bee Journal...............**75c.**

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

DARWINISM with its theory of the evolution of man from the animals and his extinction at death overthrown. A personal God and an eternal existence for man proven by *science.* Infidelity and Materialism dethroned. The *Wave theory* of Sound, taught in colleges and high schools for 2,000 years, proven to be a stupendous scientific fallacy. Revolutionary in Science and the most remarkable book of this or any other age. Royal Octavo, 528 double column pages, handsomely bound and containing very superior likenesses of the great scientists of the age, Darwin, Huxley, Hemholtz, Mayer, Tyndall and Haeckel. $2, by mail, postpaid. Local and Travelling Agents Wanted. Circulars, with table of contents and "opinions of the press," and of Clergymen, Professors in Colleges, etc., free to all.

SCHELL & CO., 52 Broadway, N. Y,

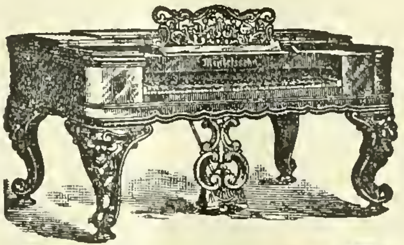
BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **27c.** per pound, delivered here, Cash on arrival. Shipments solicted.

To avoid mistakes, the name of the shipper should always be on each package.

ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL

MENDELSSOHN PIANO Co's.



PIANOS

$850 Square Grand Piano for only $245.

PIANO STYLE 3½ Magnificent rosewood case elegantly finished, **3 strings, 7 1-3 Octaves,** full patent cantante agrafles, our new patent overstrung scale, beautiful carved legs and lyre, heavy serpentine and large fancy moulding, full iron frame, French Grand Action, Grand Hammers, in fact, every improvement which can in any way tend to the perfection of the instrument, has been added.

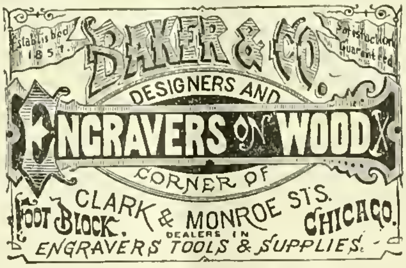
☞ **Our price for this instrument, boxed and delivered on board cars at New York, with fine Piano Cover, Stool and Book, only.......................$245.**

Reduced from our late wholesale factory price, **$295,** for 60 days only, to have this beautiful Piano introduced. This is now, by far, the **greatest bargain** ever offered the musical public. Unprecedented success! Tremendous demand for this style! Order at once.

This Piano will be sent on 15 days' test trial. Please send reference if you do not send money with order. *Cash sent with order will be refunded and freight charges paid by us both ways if Piano is not just as represented.* Several other special bargains: **Pianos, $160 up.** Over 15,000 in use, and not one dissatisfied purchaser. Handsome Illustrated Catalogue mailed free, giving the highest testimonials ever awarded any manufacturer. Every Piano fully warranted for 5 years.

SHEET MUSIC ⅓ price. Catalogue of 3,000 choice pieces sent for 3c. stamp.

MENDELSSOHN PIANO CO.,
21am1y Box 2958, New York.


Established 1857.
BAKER & CO.
Satisfaction Guaranteed.
DESIGNERS AND
ENGRAVERS ON WOOD
CORNER OF
CLARK & MONROE STS.
FOOT BLOCK.
CHICAGO.
DEALERS IN
ENGRAVERS TOOLS & SUPPLIES.

Florida Land--640 Acres

☞ CHEAP FOR CASH. ☜

DESCRIPTION,—Sec. 4, township 7, south range 7 west, Franklin county, Florida, situated about 50 miles south of the Georgia line, 25 miles west of the city of Tallahasse, the capital of the State, and about 25 miles northeast of the city of Apalachicola, a seaport on the Gulf of Mexico, and within 2 sections (5 and 6) of the Apalachicola river; the soil is a rich, sandy loam, covered with timber.

It was conveyed on Dec. 31st, 1875, by Col. Alexander McDonald, who owned 6 sections, including the above, to J. M. Murphy, for $3,200, and on Sept. 5th, 1877, by him conveyed to the undersigned for $3,000. The title is perfect, and it is unincumbered, as shown by an abstract from the Records of the county, duly attested by the County Clerk; the taxes are all paid and the receipts are in my possession.

I will sell the above at a bargain for cash, or trade for a small farm, or other desirable property An offer for it is respectfully solicited. Address,

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents;** in paper covers, **50 cents,** postpaid.

925 W. Madison Street, Chicago, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm. Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

BEESWAX

WANTED.

State Quantity, Price and Quality.

CHAS. DADANT & SON,
Hamilton, Hancock Co. Ill.

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
13wtf Abronia, Mich.

SWEET CLOVER SEED,

This year's crop, all of the white variety, 28c. per pound; $3.75 per peck; **$13.00** per bushel.

☞ I can fill no more orders for Queens this fall, having sold all I had to spare, leaving many orders unfilled, and with orders still coming in. The advertisement in the Weekly Bee Journal did it.

I. R. GOOD,
5wly Nappanee, Elkhart Co., Ind.

Excelsior Dunham and Vandervort

FOUNDATION.

Owing to the large advance in the price of wax, I now quote prices thus: Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

J. V. CALDWELL,
3wly Cambridge, Henry Co., Ill.

AT LULING, TEXAS.

I breed PURE ITALIAN BEES AND QUEENS for sale; manufacture Hives of any style and Comb Foundation. Dealer in Novice Honey Extractors, Bingham Smokers, and everything used by modern bee-keepers. Write for prices. Beeswax wanted.

14w39t **J. S. TADLOCK.**

HONEY.

As I do not sell honey on commission, and buy only such kinds as I need in my line of trade, I cannot accept any shipments without previous correspondence.

I can sell Beeswax of any quality, and will pay the regular market price for it, in any quantity, or exchange for it comb foundation, without previous correspondence.

ALFRED H. NEWMAN,
40wtf 923 West Madison Street, Chicago, Ill.

MARKETING HONEY

☞ Send 15 CENTS for Dadant's pamphlet on "Harvesting, Handling, and Marketing Extracted Honey."—You will get many times the value of your 15 CENTS in the hints and ideas that it will give you. Address,

CHARLES DADANT & SON,
Hamilton, Hancock County, Ill.

FLAT-BOTTOM
COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
Sprout Brook, Mont. Co., N. Y.

Sweet Clover

AND OTHER SEEDS.

Having a large stock of the new crop of Alsike, White and Sweet Clover Seeds, I can fill orders at **30c.** per pound, **$4** per peck, or **$15** per bushel.

Also, all other SEEDS for HONEY PLANTS,

Send for my Catalogue.

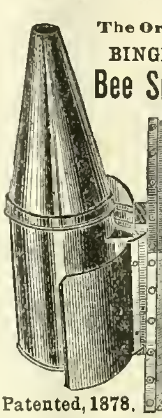
ALFRED H. NEWMAN,
923 West Madison Street, Chicago, Ill.

"RED TAPE!"

Who will be the first to copy?

25,000 IN USE.

The Original
BINGHAM
Bee Smoker



Patented, 1878.

If you buy the Original Patent Bingham Bee Smoker, you will aid the inventor of improved bee smokers—get the best, that never go out—always please—never is complained of—the standard of excellence the world over—better and handsomer this season than ever before. Price per mail, postpaid, from 65 cts. to $2. Our patents cover all the smokers that will burn sound stove-wood, or do not go out. If you buy our smokers and honey knives first, you will have to buy no others.

PRICES:

	Handed to Customer.	By Mail, Postpaid.
Wide shield Conqueror, 3 inch	$1 75	$2 00
Large Bingham Smoker (wide shield), 2½ inch	1 50	1 75
Extra Bingham Smoker (wide shield), 2 inch..................	1 25	1 50
Plain Bingham Smoker, 2 inch....	1 00	1 25
Little Wonder Bingham Smoker, 1¾ inch	50	65
Bingham & Hetherington Honey Knife, 2 inch..................	1 00	1 15

To sell again, apply for dozen or half-dozen rates.

Send for free description and testimonials, to

BINGHAM & HETHERINGTON,
17wtf **Abronia, Mich.**

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,**
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—‡o‡—

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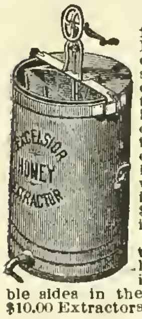

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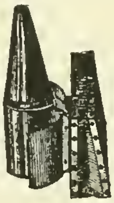

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.......... 721
The Coming Winter.......... 721
Instincts of Bees.......... 721
Statistical Information—Suggestions.......... 722
Bees and Honey at Virginia State Fair.......... 722
Weather Predictions for 1883.......... 723
Swarming vs. Dividing.......... 723
Subscription Credits.......... 723
New Premiums for 1883.......... 724
Our Clubbing List.......... 733

Among Our Exchanges—

Strained vs. Extracted Honey.......... 724
Honey Production in Pennsylvania.......... 724
Systematic Labor will Win.......... 724

Correspondence—

How and Why I Clip Queens' Wings?.......... 725
How I Winter My Bees.......... 725
Bee-Keepers' Visits to One Another.......... 726
Comments on the Chicago Convention.......... 726
Wintering Problem Solved by Lime.......... 727
Sowing Honey Plant Seeds.......... 727
Effect of Dampness on Bees in Winter.......... 728

Convention Notes—

Local Convention Directory.......... 729
Haldimand, Ont., Convention.......... 729
Convention Notices.......... 729
Texas Convention.......... 730

Selections from Our Letter Box—

My Season's Work.......... 731
My Report for 1882.......... 731
Packing Bees in Chaff.......... 732
Satisfactory.......... 732
What Is It?.......... 732
A Partial Report.......... 732
Averaged 100 lbs. of Honey per Colony.......... 732
To Prof. A. J. Cook.......... 732

The Coming Winter.

We are all very much interested in the question now so often asked, viz.: "What is to be the general character of the ensuing five winter months?" An exchange very truthfully remarks that whether the comet is causing us trouble or not, certain it is that this planet of ours is very much disturbed of late. Our own cyclone period had scarcely subsided in the West when the eastern States were visited with wind storms and flooded with heavy rains. Then the weather took a jump to the Phillipine Islands, where 60,000 persons were rendered homeless in less than an hour; then another jump to Cuba. Now, the Spanish dominions are again visited, this time by a gale on the southern coast, which has done much damage to shipping and caused the death of several fishermen. In England, the inundations of the Thames valley have flooded the suburbs of many towns, impeded traffic and done immense damage to property. In France the river Seine is rapidly rising. Floods have stopped traffic between Marseilles and Cannes on the Mediterranean, and the Austrian empire is also to be counted a severe sufferer from these convulsions of nature.

On another page we have quoted the weather predictions of Mr. R. Mansill, of Rock Island, Ill., as given by him in his "Perhelia Crisis," a new work on meteorology, which will be read with interest.

According to Mansill, the winter will be an unusually mild one, but the spring will be backward and cold. June will open the summer with fine weather, but from July to September it will be cold, below the average temperature. These predictions are given for what they are worth, but should serve to warn bee-keepers generally to prevent the spring dwindling of bees, by their careful and wise protection, and be ready with populous colonies for the honey-flow in June; then, whether they get much more or not, they will be sure of so much honey, and can cheerfully take the risk for the future.

Up to the present time the weather generally has been warm, with but little wind or anything to indicate winter, while by this time, two years ago, everything was frozen up, and winter had come in good earnest.

◆

Instincts of Bees.—At a meeting of the British Bee-Keepers' Association, held at London, Oct. 18, 1882, after the routine business, Mr. G. D. Haviland read an interesting paper on "The Social Instincts of Bees: Their Origin by Natural Selection." Mr. Haviland treated his subject in a masterly manner, and was heartily applauded at its close. There was a large attendance of members, including several ladies. The Rev. F. T. Scott presided. The Honorary Secretary announced that Sir John Lubbock would have taken the chair on this occasion, but a prior engagement prevented him from doing so.

◆

☞ Mr. C. H. Lake has sent us a photographic view of his bee tent, used at the various Bee and Honey Shows during the past summer. We have given it a place in the BEE JOURNAL Album.

◆

☞ Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

Statistical Information—Suggestions.

In reference to the committee appointed by the late meeting of the North American Bee-Keepers' Association, at Cincinnati, O., we have received the following letter from ex-President Cook, being a duplicate of one he has sent to the New Jersey State Bee-Keepers' Association:

At the recent very interesting meeting of the North American Bee-Keepers' Society, there was a very full discussion of the importance of more full and accurate statistics of the present condition of Apiculture in the United States, both as to the number of colonies of bees and the honey product. It was thought that nothing would so aid our art as such information. The magnitude of the business once known, and it would be better appreciated as one of the important industries of the country. As a result of the discussion, a committee was appointed to take the subject into consideration, and act, if possible, so as to accomplish the result.

The committee were: Messrs. C. C. Miller, T. G. Newman and A. I. Root. All of the money in the treasury of the Society was pledged to the accomplishment of this result.

Of course no one will fail to recognize the value of such statistics; but the possibility of gathering them is a question of reasonable doubt. I have thought of a plan which I believe may be made practicable; I wish to suggest it for discussion, in hope that it may be improved, or a better plan suggested.

The plan is that the Committee prepare blanks, suggesting the desirable facts, and that these be sent to an enterprising bee-keeper in every town or county of the United States, upon application, and that said person see that the supervisor of his town or the supervisors of his county have these blanks, and that said supervisor be pledged to get the desired facts as he takes the assessments. It would seem that there must be such a bee-keeper in every county, if not in every township. These could be reached through the bee periodicals and other journals. These blanks, when once filled, could be gathered by the same bee-keeper, and sent to the committee. I have already asked several supervisors in this State of the practicability of this scheme, and all report favorably. It seems to me the information could be made more correct and be secured more cheaply in this way than in any other. In fact, I can see no other way to compass it. I hope that the matter will be thoroughly discussed by you, and that we shall get some practical results as the outcome of your deliberations. A. J. Cook.

We cheerfully give place to the above suggestion of Prof. A. J. Cook, and, by the time the committee shall assemble, organize and prepare to act, the members will, no doubt, have given them due consideration, and be then and there enabled to decide upon a plan of operation—if they undertake this work.

Incidentally, we will remark that we do not think that "supervisors" (more generally called "assessors"), will take any trouble to get the "desired facts," unless they are well paid for it. Our experience with such men gives us no confidence either to ask or expect anything of them above or beyond the regular routine of their duties. There are some who would be obliging enough to do it—but we fear the great majority would either absolutely refuse to do so, or else lightly promise, with the intention of forgetting to fulfill their promise, "made just to get rid of it," or, in some other way, fail to obtain the desired information.

Unless the bee-keepers, individually, can be enlisted in the work, and for the sake of benefitting themselves and aiding the honey markets generally throughout the country, we fear it will be a failure.

We rather prefer the plan suggested by Mr. J. S. Terrill, P. M., of Ridgeville, O., at the National Convention, which is described thus by the Secretary of the Convention: "He mailed postal cards to every post office in the county, asking the postmaster to write on it the names of the bee-men at his office. The cards were all addressed to himself, so the postmaster had nothing to do but to put it on in pencil, and drop the card in the mail. Now, by mailing similar cards to all the bee-men, with a printed request, and blanks to fill out, he got almost a correct report of all the bees in Lorain county, and of the honey raised. This list of names he considers worth all they cost, for calling a convention or any other purpose pertaining to the industry."

The Vice Presidents of each State could appoint some bee-keeper in each county to act, in the way that Mr. Terrill did, and thus obtain, with some degree of absolute certainty, the desired information. This he could transmit to the State Vice President, and he to the Chairman of the Committee on Statistics, to be tabulated and published. But the great drawback to all this is the *cost*. Perhaps no one has even thought of that; we have, however, made a careful estimate of the cost of postal cards, envelopes, circulars, etc., and at the least calculation, such alone will cost $4,000, even if the labor of the committee be *given* to the cause.

Prof. Cook remarks that "all of the money in the treasury of the Society was pledged to the accomplishment of this result." That amount is, we think, less than $150—where is the small balance of $3,850 to come from? Is it expected that the committee shall make up the small deficiency? As it is only about $1,300 for each member of the committee, for the honor, work and abuse combined, we presume they will, cheerfully—"go home and think about it?"

◆

Bees and Honey at Virginia State Fair.—We notice by the Richmond, Va., papers that there was a very creditable display of bees and honey at the Virginia State Fair. The daily papers at Richmond contained the following notices of it on Nov. 3, 1882:

The exhibit of the Sunny Side Apiary, of Baltimore, deserves more than what the newspapers have said about it. Mr. C. H. Lake is the manager, and was very busy yesterday showing the workings of his new hives, which are considered by bee keepers to be the best made. Mr. Lake exhibited Cyprian, Holy Land or Syrian, and the two species of Italian bees. From one colony 220 pounds of honey was obtained in six weeks.—*Daily Whig.*

One of the attractions at the Fair is the exhibition of Mr. Charles H. Lake, manager of the Sunny Side Apiary at Baltimore, Md. This gentleman has a large tent, under which he shows a case of over two hundred pounds of honey made from one hive; has several colonies of Italian bees, one of Cyprian bees, and also other foreign bees. Every appliance used in this business is shown by Mr. Lake. He is running seven hundred hives this season.—*Daily Dispatch.*

◆

☞ We have received, from the publishers, a copy of Edwin Alden & Bro.'s American Newspaper Catalogue, including lists of newspapers and magazines published in the United States and the Canadas; together with the population of the Cities, Towns, Counties and States in which they are published, and many other items of interest. It is a large volume of over 700 pages, and is nicely bound in cloth. There are in America 2,945 counties in which papers are published—and the whole number of papers published is stated in this catalogue to be 12,158. It is a very useful book. It is published by Edwin Alden & Bro., Cincinnati and New York.

◆

☞ New subscribers for the Weekly Bee Journal for 1883, can obtain all the rest of the numbers for this year by sending $2 to this office.

Weather Predictions for 1883.

Mr. Richard Mansill, of Rock Island, Ill., has published a work called the "Perihelia Crisis." In it we find the following concerning the weather from now until the end of next year. Concering December, he remarks as follows :

The world must expect to hear of considerable wild earth disturbances from about the 6th to the 14th of December of this year, 1882, or at about the time of Venus' transit, Dec. 6. At its transit, Dec. 8, 1874, there occurred a great storm on the Baltic sea, that made a thousand people homeless; many vessels and lives were lost on the British coast on the 9th ; a severe earthquake occurred at New York and along the Hudson on the 10th, and coinciding with these occurred the breaking out of the volcanic ash showers of Iceland.

He gives the following predictions for each month of the next year :

January—the temperature is likely to average above the mean of the season during January, both in Europe and in the United States—or between latitudes 35 and 37 degrees north latitude in the United States and parts of Canada, and between latitudes 35 and 55 degrees north latitude in Europe. There may be sharp depression of temperature between the 9th and 12th, and between the 22d and 24th, together with storms, and again about the 29th.

February—The temperature of February is also likely to average a little above the mean of the season—with sharp depressions, perhaps below the mean, from the 16th to the 12th, and from the 20th to the 25th, accompanied with severe snow storms in the more northern districts, and heavy rains and some lightning in southern sections.

March—The temperature of March is not expected to average above the mean of the season, neither is it likely to be an unusually stormy month. It will not probably run to great extremes of temperature, either of elevations or depressions. It may be somewhat stormy from the 8th to the 12th, and from about the 22d to the 25th.

April—The temperature of April will probably average below the mean of the season. It will also be a more stormy month than March, with elevations and depressions of temperature greater than those of March, for the season.

May—The temperature for May will probably average below the mean of the season. It is not expected to be quite as stormy a month as April.

June—The temperature of the first half of June will probably average about the mean of the season, and the last ten days below, with strong storms between the 4th and 9th.

July—The temperature for July will probably average considerably below the mean of the season, both in Europe and the United States. In fact, July is expected to be the cold, stormy month for the season of 1883, as that of May, 1882, was (as pointed out by this theory) for that year.

August—The temperature is also likely to average below the mean of the season during August, but perhaps it will not be quite so stormy as July.

September—The temperature for September will probably average a little below the mean of the season in the United States and Europe, though the temperature should begin to improve toward the latter part of this month. There should not be an excess of storms during this period.

October—The temperature for October will likely average a little above the mean of the season. The month will be somewhat stormy, or more so than September.

November—The temperature will likely average above the mean of the season during November, in the United States and Europe. The month will have a full average of storms, but not perhaps quite as many as October.

December—The temperature for December is likely to average considerable above the mean of the season in the United States and Europe. In fact, it is likely to be a pleasant winter month, with less than an average of severe storms.

We will probably have this year, (1882) a warm autumn and mild winter, on the average, continuing up to the 1st of January.

From the above monthly statements or forecasts of the weather temperature of the year 1883, it may be said that we are expecting to experience a moderately mild winter (1882-3), followed after March by a long, cool spring and summer again during 1883—while from this prospect it may be inferred that a mild winter north and south brings about a sort of an unusually early spring in southern latitudes, or latitudes lying between 33 and 38 degrees in the United States.

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Swarming vs. Dividing.

Very often we have enquiries, asking our advice as to whether it will pay better to divide, for increase, than to trust to natural swarming; we, invariably, answer by saying that it saves time and money, and gives more pleasure and profit to the bee-keeper to divide for increase. We have just noticed the experience of Mr. W. W. Dunham, of North Paris, Me., as given in *Home Farm*, and append it, to illustrate in a practical way, the points of pleasure and profit. He says:

On July 11, my first swarm came off, at about seven o'clock in the morning, and as it was so early in the day, it was by the merest chance that we discovered them. It was a nice large swarm and I was on hand with all the pride of a young bee-keeper, to hive them, but after circling around in the air for some time they arose up over my house and started off. I did not feel like giving them up in that quiet manner and started after them. I had two men at work for me who also started in pursuit. We soon got left behind but we kept on in the direction they had taken, as near as we could through fields, pastures, meadows of stout, wet grass, through brooks, bushes, brush and mud until we came to a large piece of woods, certainly a mile and a half from home. We then separated and began to hunt for the bees, and after hunting a long time one of the men heard them up overhead, and we at last discovered them clustered out on a limb of a rock maple tree about fifty feet from the ground. I then returned home and got a line, saw, rope, etc., and prepared to hive my bees. One man climbed the tree with the rope, passed it around the limb the bees were on, and up through another crotched one, dropping the end down to the ground. I then took hold of the rope while he sawed the limb off and steadied it down as I lowered away on the rope, and to my gratification we soon had them in the hive, where I let them remain until evening when I took a hand with me and went after them, bringing them home lashed between two poles.

Now, I just saved my swarm of bees, but after spending three half days work, besides part of the night, I concluded that it was rather an expensive way of swarming bees and that another year I would control the swarming myself. I had two more natural swarms come off, which I hived without any trouble, after which my bees quit swarming for the season. My bees gathered a good lot of honey and were very strong in bees, so I thought I would do a little swarming and dividing myself, and from the seven hives that I then had, I made four more.

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Subscription Credits.—After sending subscriptions to this office, we would respectfully ask every one to look at the label on the wrapper of the next two papers, and there they will find the credit indicated thus : Those who have paid for the first six months of next year will find " June 83 " after their names. Those who have paid for the whole year will find " Dec. 83 " on their papers. The credit runs to the *end* of the month indicated. If the mark is " Dec. 82," it means that the subscription is paid until the end of the present year. Please remember that the credit given on this label is a sufficient notification of subscriptions due and receipt for payments made. If not so indicated within two weeks after sending money to us, you may be sure something is wrong, and should write to us about it. It will save annoyance and trouble if our subrcribers will give this matter due attention.

New Premiums for 1883.

As the season for reading has now arrived, we hope that each of our subscribers will endeavor to send at least one new subscriber for the Weekly BEE JOURNAL for 1883 and thus not only help on the cause of progressive bee-culture, but assist in sustaining the only Weekly bee paper in the world.

Providence has smiled on the bee-keepers during the past season, and as a general thing they are abundantly able to procure a good assortment of bee-literature.

In order to encourage every one who keeps bees, be they few or many colonies, to thoroughly read the many very interesting books on bee-culture, now published, we have determined to make liberal offers, which will be available until January 1, 1883, as follows:

To any one sending us $8 for any books they may select from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for one year.

To any one purchasing $4 worth of books, selected from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for six months or the Monthly for one year.

Any one sending us a club of two subscribers for 1883, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Strained vs. Extracted Honey.—The Cincinnati *Gazette* makes the following comparative statement, showing the difference between extracted and strained honey:

> Before the invention of honey extractors, the so-called Cuban honey flooded our markets. It was produced wild in the trees of the West India Islands, and with larvæ in different stages of development, and bee bread and other impurities mashed into a promiscuous mess, and thus shipped to New York and Boston. Druggists then pretended to cleanse and clarify it, but it was not always done, and besides, it was almost impossible to make it a palatable article, or fit for the use of the sick. Now a much finer article is used, even for manufacturing purposes.
>
> Bakers, tobacconists, meat curers, druggists, compounders of liquors, and other manufacturers, use honey extensively, though they do not require for their purposes the choicest of all brands, the white clover honey, but instead the linden, buckwheat, or poplar honey.
>
> The white clover honey is confined to table use and medical purposes. Jacob Vogel, pork packer in this city, buys a barrel of honey every other week from Mr. Muth for curing hams.

Honey Production in Pennsylvania.—The Germantown, Pa., *Telegraph* gives the following on honey-production in Pennsylvania:

> Some thirty or forty years ago there was much more honey produced in eastern Pennsylvania, and especially in the counties contiguous to Philadelphia, than there is at the present time, and we may ask why less attention is bestowed upon this really important branch of farm industry now, than before. It cannot be on account of the price obtained, for that is higher now than we believe at any former period. One person, who abandoned the business, said that the bees gathered less honey than formerly, in consequence of the scarcity of clover fields and other seeding resorts of the bees; but this can hardly be, as while it is an undecided question that the cultivation of clover has fallen off, the increase of other bee pastures has clearly taken place. Take for instance the marked increase of flowers in the garden of every farmer, as well as the increase of vegetable crops, many of which put forth immense quantities of blooms. There are many of the cultivated trees also that flower enormously, and far more than make up for all the other losses combined. We rather think that the extra care that bee culture requires, over any other business, to produce the same amount of income, is the cause of its decline. The honey culture, in fact, is a science, and should inspire in those who pursue it, a love for it outside of the profit account, and in this case, the enjoyment which it imparts, must be considered as a part, and a very desirable part, of the returns.
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> The improved hives, which have taken the place of the old, cumbrous ones, that were so awkward in handling and failed to yield an equal supply of honey, when compared to these remodeled ones, make the care of bee-keeping much easier and pleasanter. The small sections of honey make the article much more salable than formerly, though they require careful handling. Altogether, with due care and a proper management of this beautiful and interesting branch of domestic industry, the apiary should be found upon a dozen farms, where it is now found only upon one.

Systematic Labor will Win.—The Valparaiso, Ind., *Vidette*, of Oct. 26, 1882, contains the following notice of a visit of its correspondent to the apiary of Mr. T. S. Bull:

> Those who pay the closest attention to their home interests, meet with surest success. System and sufficient labor causes the poorest land in our county to produce and amply repay all pains. It was our pleasant opportunity to call on an old resident, Mr. Theodore S. Bull, not long since. Mr. Bull showed us through his cellars, which are arranged in separate apartments; one expressly for bees, accommodating nearly 200 colonies, in such manner that any temperature can be maintained. The next is a very large room, arranged for milk and butter, with a refrigerating cupboard where all kinds of eatables can be kept in perfect condition. Such a room as this is much to the convenience of a house wife, and the comfort of a family. The next room was arranged for vegetables, easy of access and well ventilated. These cellars are probably the best in the country.
>
> We were next conducted through the bee house—consisting of two apartments—a work room and a store room. Mr. Bull manufactures his hives, boxes for honey, racks, and everything needed in this line; also comb foundation to use in hives and boxes, thereby saving much time and labor for his bees. His honey extractor is a modern invention, so that his bees can fill the same comb several times. He then invited us, if we were not afraid, into his apiary, which was really a sight, consisting of about one hundred and eighty colonies, which were the largest and strongest we ever saw. He quietly gave each a few puffs or smoke, and then showed us the different queens and explained their habits, handling them as if they were flies.

☞ Articles for publication must be written on a separate piece of paper from items of business.

CORRESPONDENCE

For the American Bee Journal.

How and Why I Clip Queen's Wings.

G. M. DOOLITTLE.

While writing my series of articles, I mentioned having my queens' wings clipped, in connection with natural swarming. At that time, I was requested by several to tell how I clipped the queens' wings, and why I did so, which I will now try to do.

The first thing to be done is to find the queen. This is quite easily accomplished at any time during the first rush for pollen or early honey in the spring, for, at this time, the major part of the bees are old, or field bees. Hence, during the middle of fine days but few bees are at home to hinder our seeing the queen; the rest being busy bringing in the first forage. I take advantage of this fact, and make sure that all queens are clipped, the knowledge of which makes me feel sure that no swarm can steal a march on me and get to the woods.

Before starting for the apiary, we want a pocket knife, the blade of which should be as sharp as possible; then we are ready for finding the queen. Having found her, I hold the frame in my right hand, and with the thumb and fore finger of my left hand, carefully lift her from the comb, by taking hold of her wings. Now put down the frame and hold the queen within two inches of the tops of the frames in the hive. Take the knife and carefully draw it across the wings till the queen drops, and the work is done.

There is no danger of cutting yourself, for the knife will not cut your finger till the queen's wings are off, and as soon as she drops you will stop cutting, of course. I generally cut all the wings I get between my thumb and finger, if it takes *all* the wings, for the reason that a queen without wings is much more easily found. If she can't fly with a part of one wing off she may as well have all off, for wings were created for the purpose of flying.

Now I come to why I clip them. The third year I kept bees, about two o'clock in the afternoon, a large nice swarm came out which was hived. At four o'clock they were busily at work and continued thus the remainder of the day. The next morning I was called from home till nine o'clock, and upon going to the apiary to look for father's swarms, I saw that scarcely a bee was to be seen about this new hive. I at once opened it and found it deserted, except a few bees which had returned from the field after the swarm had left. During the night several pieces of comb had been built and the queen had laid a few eggs therein. I was very much disappointed and vexed at the loss of my swarm, and vowed then and there that this one should be the last which should leave in that way, which has proved true. I at once clipped all my queens' wings, and soon found that I had not only made sure that no bees could go to the woods, but I also had made a saving as regards the trouble of hiving swarms; for before, I often had to climb tall trees to get swarms, or what was still worse, bother half an hour or more, trying to get a swarm out of the forks of a tree or off the body of the same.

Now, all I had to do when a swarm issued, was to go, with a wire cloth queen cage in my hand, to the front of the hive casting a swarm, and when the queen came out let her run into the cage, into which she was fastened. Then the hive was moved to a new location, and a new hive, all ready for the bees, was put in place of the old one. Missing the queen, the bees would soon return, when the queen was liberated and all entered the hive or hived themselves, as it were. No climbing of trees, cutting off limbs, or lugging a cumbersome swarming box about, was necessary. If, for any reason, I wished to have the swarm stay out awhile, I would hang the cage containing the queen, with the alighting swarm, and thus hold them until I was ready for them. If I did not wish to cut off the limb when I was ready to hive them, the changing of hives was done as before, the queen taken from the cluster, and soon the bees would return.

Again, when two or more swarms came out together, by having the queens back in cages, they could be made to go back to the place they came from, by a little trouble being taken to spread a sheet over the hive likely to receive the most bees. As the hives were changed while they were out, each swarm was secured where I wished them.

In one case I had as high as eight or ten swarms out all together, and one of the queens was placed with them till I could get the eight hives changed; when I shook all into a large basket and put them into the different hives till I had an equal amount of bees in each hive.

In all cases I have observed, a part of the bees, upon returning, will find the queen and cluster upon her, if no one is present to cage her when the swarm issues; so there is little danger of losing a queen. If I am called away from home during swarming time, and if Mrs. D. is absent also; when I return I go through the yard, looking about, and, if any colony has swarmed, I readily find this little cluster of bees with the queen. Now, to find where she belongs and which one has swarmed, take the queen, after caging her, and put her where the bees cannot find her, when they will soon return to the hive from which they issued, thus showing where the queen belongs.

Much has been said about the fountain pump to keep bees from decamping. The reader will readily see that the clipping of queens' wings does away with that expense. If you wish to use a fountain pump for other purposes, it might pay for such, but the clipping of queens' wings is a more effectual preventive to keep the bees from going to the woods. Other reasons might be given why I clip the queens' wings, but the above are the most of them. I will say that I would as soon think of going back to black bees and box hives as I would of leaving the wings of my queens so that they could fly.

Borodino, N. Y.

* * *

For the American Bee Journal.

How I Winter My Bees.

IRA BARBER.

As the time is now at hand for getting our bees into safe quarters for winter, and as the plan that I have practiced for the last twenty years has not failed to bring them through safely, and nearly as strong as when they were put into winter quarters, unless they starved, I give it for the benefit of those that have failed to winter their bees successfully.

Any warm cellar, under a dwelling house, occupied by a family, no matter how damp, if the water does not reach the bees, I consider a safe place for them; while a cellar that freezes and thaws, at every change in winter, I should consider a very unsafe place to risk them. I have wintered bees in wet cellars (so wet that water stood all over the cellar bottom, all the winter), and have had them come out in fine condition, after remaining there from the middle of November until May 10. Bees will winter in a warmer atmosphere than many suppose, as they will stand more heat than cold, where the atmosphere is kept pure.

Where small lots are kept, there is no necessity of ventilating a cellar, but when a cellar is to be filled with bees it is necessary to ventilate from the top of the room. I use a three-inch tin pipe, 24 feet long, with an elbow at the bottom, long enough to reach through the wall. This pipe goes up on the outside of the building and enters the cellar near the top of the room, where the bees are kept. I have no draft of fresh air coming into the room from any quarter, and have found that if I wish the bees to keep quiet I must keep fresh air away from them.

I carry my bees into the cellar about the middle of November. My hive is the Quinby eight-frame hive. I do not use any division boards, neither do I punch holes in the combs to make passage for the bees, but all are put in, just as they were when the honey was taken off, with a cloth on the top of the frames, all covered with bee glue, and a board on the top of that. I use no plank or benches to put them on in the cellar, but pile up in columns, four deep; the first, or bottom tier is placed on caps from the hives, ten inches high, this brings the bottom tier about one foot from the cellar bottom, and every colony on the bottom tier are raised up from the bottom board one-half inch, while all the rest are left just as they were when in the yard; entrance all open and top of hive tight as glue, cloth, top board and the weight of the pile will make them.

When all are packed in this way, I close and bank up the cellar, including the windows, and let them entirely alone, until it is time to put them out, which, as a rule, is the latter part of April or first of May. The hives are placed close together; no spaces or alleys left. Many will want to know how bees appear in a close, warm cellar. I will say that the atmosphere is warm, and that the bees are comfortable, outside of the hive as in it, and do not cluster, but stand on the combs just as they will in summer. I have left them there in November, when the bees were standing out on the ends of every hive, that I could see, and found them just so when I went there in April. I found no dead bees on the bottom boards, and the loss last winter was less than three bushels from 193 colonies, in one cellar; and 1½ bushels in the other cellar, where 130 were kept, but as a rule I find about 3 bushels to 100 colonies. I find the hives bright and clean when the cellar is first opened, showing plainly that if there is any discharge from the bees, it is in a dry state, for they cannot get the dysentery in as warm a room as the one in which mine are wintered. When they are carried out in the spring, their bodies are not distended, but look as they did all through May and June of the past season, in this section.

To those that question this plan of wintering on so high a pressure as I have described, I will say that I will show bees that I bought of M. Quinby, in 1863, or rather the hives and combs that have stood 19 winters and are good for many more, if wintered as I have described.

Bees wintered thus will come through in as good condition as they were in the fall; and if not put out until there is something for them to do, they will not dwindle, but be ready for swarming in about forty days after leaving the cellar, as a rule.

I would not attempt to winter bees in a very dry cellar, as warm as I have described, for they require more moisture than could be found in so warm a room. Had I an exceedingly dry cellar, and was obliged to use it, I should thoroughly drench the bottom with water before using it. I once used a dry cellar in which to winter my bees, and found it the worst cellar that I ever tried. Bees were not quiet for a single day while in it. I have thought that a solid cold winter was best for bees, on the plan that I have described, but as last winter was the warmest that I ever knew, and that the bees came through in fine condition, I can now say that either hot or cold, the warm damp cellar does not fail to bring them through in good condition.

Where bees require feeding I use coffee A sugar, and feed enough in one night. I give the feed hot, and use common tin pans for feeders, and if one does not hold enough, give them two at the same time. I put the pans on the ground, near the hive to be fed, fill it with hot syrup, break up some old comb for floats, to keep the bees out of the liquid, then put the colony over the pan, wrap them up at the bottom to keep out the cold air, and find in the morning that all the feed is up in the hive; the hive should then be put back on the stand, and all pans taken away. I feed as late in the season as I can; then I know what they have. It is not necessary to have the feed sealed, when wintered in my warm cellar. When a hive is but one-third, or half filled with combs, I prefer to lay combs of honey on top of the frames, well wrapped in cloth, and the cap of the hive over all; this I prefer to any other plan of feeding.

DeKalb Junction, N. Y., Oct 24, '82.

Kansas Bee-Keeper.

Bee-Keepers' Visits to One Another.

J. E. POND.

If our brother bee-keepers would often make interchanges of visits with each other, much benefit, as well as pleasure, would be derived therefrom. While we gain much by reading accounts of experience, far more could be gained by seeing the results in person, and a personal conversation will often cause truth to rise and error to disperse, when a discussion carried on in print might only serve to more firmly fasten the different views of the matter under consideration in the minds of those conducting the discussion.

Acting on the above idea, I lately stole a day from my business and made a trip to the beautiful town of Wenham, in this State, where is located the apiary of Henry Alley, the largest queen breeder in New England and one of the largest in the whole country. I luckily found friend Alley at home, and he, although quite busy, devoted a half day to showing me his apiary and making the visit a pleasant one to me. At present he is breeding Italian, Cyprian and Holy Land queens, having dropped the Egyptian and Hungarian. He has his queen cells built in full colonies in his home apiary, but has the different races fertilized in different yards, located about three miles apart. As no bees other than his own are kept in town, he has no trouble with impure fertilization, but is enabled to warrant every queen he sends out. He has been engaged in breeding queens since the first introduction of the Italian, some twenty years ago, and as he has made that business a specialty, and his experience has enabled him to arrive at results far in advance of the ordinary queen breeder.

By the aid of much study, and by experiment largely, he has at last discovered a plan by which he accomplishes what a short time ago would have been considered almost a miracle. I opened hive after hive devoted to building queen cells, and found such cells, built in straight rows, each cell spaced as evenly apart as the teeth of a coarse comb, and not a single cell among the four or five hundred, that I saw, but could be transferred from the comb without injury to its neighbor. Each cell pointing downwards in the position naturally given it by the bees, and this without the use of any sticks or slats. I was much surprised at what I saw, for it far excels anything which I had ever seen or heard of, and after much persuasion I induced Mr. Alley to inform me how it was done, and after receiving the desired information, I was more surprised in thinking that no one had hit upon the idea before, so simple is it, and so little labor to be done in operating it.

By his plan he has all cells built in full colonies, which are never queenless, and consequently never without brood. The cells are built in exactly that position in the hive which the owner desires, with their points downward, and so regularly spaced that not a cell need be destroyed. As his plan gives plenty of room there is no crowding, and every queen reared is large and full size. Everything is laid out to a certainty by the owner, and nothing is left to the whims or vagaries of the bees. They must build the cells in just the position desired, and the only chance there is to have an imperfect cell, is an egg being carried out from the cell given them, to some other cell, a thing which, in practice, by this plan, Mr. Alley has never seen done. Were I to take up the business of breeding queens I would adopt this plan and use no other, for it combines simplicity, economy and certainty to a remarkable degree.

Foxboro, Mass.

For the American Bee Journal.

Comments on the Chicago Convention.

MOUCH AMIEL.

I have read in the BEE JOURNAL with more than usual interest, the proceedings of the Northwestern Convention, held at Chicago, Oct. 18. The discussions are valuable when reported by an experienced bee-keeper, but are usually of very little value when reported by ordinary newspaper or periodical reporters; so that, as a rule, I much prefer the reading of essays. All cannot attend the conventions, or all of them; and but few men, in the haste of description, can communicate their knowledge as lucidly as they would in an essay.

Mr. Bussey asked, "What is the best fuel for smokers?" Why not roll blotting paper, and, if it is burned too fast, roll it very fine, and also alternate with the sheets, common straw paper, or, what may be better, procure pulp from paper mills, mold it into rolls, pressing it very firm.

Mr. Valentine said that in feeding winter stores, he mixes two measures of sugar and one of water. I tried it, (crushed sugar,) and in twenty-four hours one half was granulated. Acid may prevent it, but I think not. I tried strong vinegar, and the vial with acid in it, had mold on it in three months; the other had not, but both had a few perfect chrystals, ⅛ inches-square, at the bottom. I am of opinion that the proportions given by Mr. Oatman would be rather thin, if fed late.

Permit me to ask those that have fed bees mostly, or entirely with sugar syrup (fed in season for the bees to cap it over), if they ever had such a colony, so fed, have the dysentery? We do not seem to differ at all as to the conditions necessary to successful wintering (if there was no dysentery). to wit: Cellar, cave, clamp, spare room, hay-packing or chaff, if the thermometer is kept between 30° and 45°; dark, pure air, dry room, and if you can, upward ventilation, or, more correctly called, upward absorbents, little or no current, plenty of bees and *healthy food*. By complying with these conditions we have made, either naturally or artificially, what is equivalent to a very mild winter, but with all the most favorable conditions.

Some seasons bees are attacked with disease, and my experience is that one flight a week, say during a fine January thaw, will but little improve a colony that is much diseased. Many of us know that with, to all human appearance, identically the same conditions, each season, during some winters they have the disease, and in the succeeding and preceding ones they have been perfectly healthy. How, or why is this? Do not all rise, at once, to tell me that the winter was very cold. You forget that you had them housed and cared for exactly the same as in many preceding winters; the same room, the same temperature, the same everything, so far as you can by any possibility see. I repeat, what is the cause of this difference in their health? Is it in the honey they have stored? the pollen, or possibly, the condition of the atmosphere? We may, and often do find but a portion, say one or two, affected, the remainder perfectly healthy! How, or why is this? We all know that the honey gathered by one colony, or a portion of it, is quite different from the remainder, or other colonies in the same yard. All these are questions to be thought of. We may never agree as to the cause of the disease, but, as in the case of foul brood, or many diseases of the human family, we may find a remedy, without being able to trace it to the cause. I fully believe and hope such will be the result of well and thoroughly conducted experiments, and am fully convinced that the remedy will be found in sugar syrup.

St. Paul, Minn., Nov. 1, 1882.

For the American Bee Journal.

Wintering Problem Solved by Lime.

F. DELLA TORRE.

Without being egotistical, I am not afraid to state that the proper use of quick lime in a hive, solves the wintering problem. Pure dry air, and stores enough, is all that a good colony of bees require to winter successfully. It is impossible to have dry air in a hive in damp weather, without using *chemical* absorbents; mere chemical absorbents, such as chaff, sawdust, corn cobs, and the like, only retain moisture. When the atmosphere outside is damp, that in the hive is more so, for it has the large amount additional, from the breath of the bees, added to it. Dry cold has never killed a colony of bees for me yet; even when most of the stores were cider.

I have tried many, and costly experiments, carried on uninterruptedly through winter and summer, in my endeavors to solve this wintering problem, and until some bees are produced that can winter like wasps, or some methods, that we don't dream of now, are discovered, for protecting bees in winter with absolute certainty, I repeat that I have, in the lime protection idea, all that I desire.

Some of my friends tried the lime last winter, and their letters are enough to turn bee-keepers towards my way of thinking on this subject.

Reisterstown, Md.

Translated from Deutscher Bienenfreund, by A. R. Kohnke.

Sowing Honey Plant Seeds.

FR. HUCK.

We meet with first-class honey plants among the annuals and biennials, as well as among the perennials and plants of woody structure. Many are natives of a warmer climate than our own, but have become acclimated, so much so, that we are not aware that they are from a foreign and warmer country. The importation and culture of them in this country has been altogether a different object from providing for bee-feed, and we may assume the existence of numerous excellent bee plants, which will become known only as planting for bees especially is practiced. But even our native *flora* contains many plants which furnish honey in large quantities and very fine quality, and to improve bee pasturage we should notice these as well as those of foreign origin.

In regard to annuals they have this advantage, that they furnish ready means to improve the bee pasture the first year they are sown, and are easily cultivated. Besides that, they may be sown at such time as to come into bloom when natural sources fail, thus filling gaps in the honey season. Such annuals have to be sown generally every year, though some of them will perpetuate themselves by the dropping of their ripe seed.

The number of biennials is rather small; most generally known is *Echium vulgare*, as also rape and some varieties of clover, because they are cultivated as biennials; although, strictly considered, they are not such.

More numerous are the perennials, shrubs and trees, furnishing honey for the bees; many of them being ornamental, on which account they should largely be cultivated in gardens, parks and cemeteries. Many of them get to be very old, and may occupy the same space for scores of years. To further this dissemination they should be presented to all who would give them a place in their garden or premises. We also find that many of them may be used for other purposes, especially kitchen vegetables and plants possessing medicinal properties, so that we may derive some profit from them aside from the honey they furnish.

The most important for the bee-keeper are those plants which are of a woody structure. Once planted, they will last a generation or more. True, they do not furnish honey the first few years after being planted, like the annuals and perennials of an herbaceous character, but when once planted, will cause little or no further trouble and work.

One of the most desirable for our country is the lapwood or linden, and should be planted most extensively. To prolong the honey yield of this tree it should be planted in different situations, such as the south and north side of hills, in valleys and on top of hills; besides that, there are different varieties of this tree, some of which come to bloom earlier in the season and some later. A close observer will very often meet with specimens of such different kinds.

Through earnest work we will learn and enlarge our views. Nature is inexhaustible, and provides for the need of mankind. Nowhere is this more noticeable than in the world of plants. As soon as it becomes desirable to have a certain vegetable possess especial properties, as for instance, with respect to earliness or size, it is soon obtained. The rose, for instance, usually blooms in May and part of June, and but once a year, but now we have varieties which bloom a second time, in autumn; and some even all summer. Some varieties of our common acacias bloom all summer. It can, therefore, not be considered as an impossibility to obtain from our red clover a variety, by selection of seed of course, which would permit the bee to empty its florets of their sweet contents, which, at present, is well nigh impossible, on account of their length. The industrious and progressive should try everything.

[It seems to me more rational to adapt the plant to the animal than the animal to the plant, as to change the size of a plant is more easily accomplished, than to change the size of an animal, or any part of it. If we decrease the size of the clover heads, we may look for an increase in the number of them from each root, which would be a double gain; but if we increase the length of the bee's tongue, we may decrease the size of some other essential part, which would be a disadvantage.—KOHNKE.]

Experience and science in bee-keeping make commendable progress. Noble and high-minded men devote their time and energies to it, hence all who take an interest in progressive bee-keeping, should lend a helping hand, by the dissemination and cultivation of honey plants. Look how many honey plants your surrounding country contains, and how many it might hold in place of obnoxious weeds in fence corners and waste places, and then go to work and try to change such an aspect for the better. Those who wish to cultivate honey plants should begin at first on a small scale to learn their cultivation, and discover what kinds do best in the soil and situation at his disposal.

And now, brother bee-keeper, when you have read these few lines, plant a basswood tree; plant it this year. Awaken the interest of your children and neighbors in this good work. Having thus been industrious, your conscience will tell you at your parting hour from this world that your works and deeds are sweeter than honey.

Besides *Tilia*, there are other trees and shrubs, furnishing an abundance of honey. Chief among many may be mentioned *Asclepias syriaca*. I have seen this plant covering the side of a hill, having been there fifty years or more. Its flesh-red blossoms are eagerly visited by bees in summer and fall; the honey is said to be of excellent quality.

Another plant, furnishing a large quantity of honey, is *Borogo officinalis* (borage). Being an annual herb, it must be sown every year and may be made to bloom any time in the summer or fall, by sowing in proper time.

Nepeta bataria (catnip) should also be encouraged to grow wherever possible; it is perennial, sometimes biennial.

Especially recommendable is, *Hysoppus officinalis* (hyssop). This herb blooms in the latter part of summer when there is not much else for bees to be had. It will grow anywhere and sow itself afterwards. This plant should receive special attention, as it furnishes more honey than any other plant occupying the same ground surface.

Well worthy of consideration also, is *Hedysarum œibrichis* (esparsette), fennel, rape, caraway. The first furnishes as well good feed for cattle, whilst the seed of the three last mentioned generally bring a good price in market.

[Planting for honey is the key note to success; and we are glad to note the fact that not only are the best and most progressive bee-keepers in America now convinced of this fact, but also those of Europe and Australia.—ED.]

For the American Bee Journal.

Effect of Dampness on Bees in Winter.

S. CORNEIL.

In looking over the back volumes of the BEE JOURNAL I find that writers on wintering always give the temperature at which the repositories for bees should be kept, but they never seem to think of giving the proper degree of humidity of the atmosphere, although the latter is the more important of the two. The writers generally seem to be agreed that bees when clustered can endure severe cold, but cannot stand dampness, yet it seems not to have occurred to any one to test the degree of dampness at which they will remain healthy, and beyond which they will become diseased. The natural laws relating to the production of moisture by the consumption of food, the evaporation of moisture and the humidity of the air have been pretty well investigated and ascertained, and we only need to comprehend and apply them to attain our object. With a view to place before your readers the ideas of some of the leading scientific lecturers and writers on those subjects I will quote some of them.

Mr. Frank Cheshire, in the AMERICAN BEE JOURNAL for 1879, page 277, says: "Honey is a hydro-carbon, consisting almost entirely of saccharine matter, and like common sugar does not undergo digestion, but simply transudes through the delicate tissues into the circulation, being utilized for giving heat and force. So used, it is converted into water on the one hand, and carbonic acid on the other. These escape through the lungs, no residue remaining to be carried off in the excreta. When bees take honey it is gradually absorbed into the fluids, and passes off from the organism of the bee through the breathing apparatus."

It has been ascertained that about 70 per cent. of the honey consumed is transformed into water, and will pass off through the trachæ as vapor, if the surrounding air be dry enough to absorb it.

Mr. L. C. Root, on page 218 of the same volume of the BEE JOURNAL, says: "Some of Mr. Quinby's last experiments led him to believe that the liquid portion of the feces was evaporated through the body of the bee, when surrounded by proper conditions."

In Carpenter's Principles of Comparative Physiology, on page 356 and 358, we find these statements: "There is no reason to believe that the pulmonary exhalation is liberated in any other way than by *evaporation*, under the peculiarly favorable circumstances afforded by the delicacy and permeability of the respiratory membrane. ......

"In insects, it has been ascertained by Newport, that transpiration of fluid takes place to a considerable extent; it is, of course, difficult to ascertain what proportion of the loss of fluid takes place from the external surface, and from the prolongation of it that lines the air passages, which in this class are so extensive and minutely ramified; probably it is from the respiratory membrane that the principal liberation of it occurs.......

"If, however, the external air be saturated with moisture, and be of the same temperature with the body (so as to be unable to acquire *its* heat any increase of capacity for vapor), it is obvious that the evaporation from the lungs, as well as that from the skin, will be entirely checked."

From the principles here laid down, it is plain that if the air breathed by the bees be overloaded with moisture, the large amount of water generated by the consumption of honey will not be exhaled by evaporation from the respiratory membrane, but will remain in the bodies of the bees, and, if this condition of the air be long continued, it is at least sufficient cause for the bees becoming sick, and, I think, the most probable cause of abdominal distension and dysentery.

It will, perhaps, surprise some to learn that the natural dampness of the atmosphere is much greater during the coldest weather than it is during the months when the bees are most active. The results of observations, at the observatory at Toronto, show that for a period of thirty years, from 1841 to 1871, the monthly means of relative humidity were as follows: Of course, 0, representing dry air and 100 the point of saturation. January 83°, February 81°, March 78°, April 72°, May 71°, June 74°, July 73°, August 76°, September 76°, October 79°, November 81°, December 81°. Average for the year 77°. Taking the months of November, December, January, February and March, during which bees are confined to their hives, the average is about 81°; while for the remaining seven months, when they can fly, the average is a little over 74°, a difference of more than six degrees of dampness when the bees are least able to resist its effects.

The report also shows that the humidity of different winters varies as much as does their temperature, and it often occurs that excessively cold winters are also excessively humid, and on turning to the reports of bee-keepers, I find those are the winters in which the heaviest losses have occurred. On the other hand, it is found that when the humidity has been about normal the bees have wintered well. For instance, in the winter 1874-5, the temperature for December was 1° colder than the average for that month; January 6.89°, February 12.74°, and March 5.20°. The humidity for January was 84°, for February 86°, and for March 81°. Prof. Cook, in his prize essay, refers to it as "That terrible winter of 1874-5, terrible alike for its cold and bee-mortality." He might have appropriately added "and remarkable for its humidity."

Again, in the winter of 1880-1, December was 4.30° colder than the average for that month, January 6.35°, February 2.87°. The mean relative humidity for each of these months was 85°. The heavy losses sustained by bee-keepers during that season were too serious to be readily forgotten.

On the other hand, in the winter of 1877-8, the temperature for December was 8.68° above the average for that month, January 1.60°, February 1.60°, March 8.18°. The humidity for December was 81°, January 84°, February 81°, March 79°; on the whole, being about normal and in no case varying more than a degree from the average for each particular month. So far as I can learn from the reports of bee-keepers for that season, the bees wintered well.

The humidity as well as the temperature of different localities in the same latitude varies considerably. In selecting a location, and in preparing bees for winter, it is of importance to know exactly how those matters stand. We are told that in the old country they have meteorological societies whose special object is to ascertain the degree of heat, cold, and moisture in various localities and the usual periods of their occurrence, together with their effects on the health of the people and upon the different agricultural productions. Our bee-keepers' associations might add to their usefulness if the members were to resolve themselves into such societies, reporting the conditions of the climate and its effect on the bees, to the bee journals, for publication.

The American continent is now pretty well dotted over with observatory stations from which reports might be obtained. To collect and tabulate the results as regards temperature and humidity, would involve a good deal of labor, but it would be a valuable addition to the knowledge at present, available to those making a specialty of bee-culture.

But it may be asked what good, if we did know all about the humidity, since it is a matter beyond our control and since we are obliged to take the climate as we find it. As far as out-door wintering is concerned, this is partly true. All we can do is to give the best possible ventilation, while we, at the same time, confine the heat. A damp atmosphere will absorb some moisture, provided it be frequently changed.

The reports of Dr. Tinker, Jerome Wiltz, and Thaddeus Smith go to show that the hives having the best ventilation came through best in 1880-1. But in good cellars having a constant upcast of air, connected with a chimney, and a steady supply of fresh air through a six-inch glazed pipe, running under ground, say 200 ft., and buried below the reach of frost, experience has shown that bees winter well.

The temperature is generally nearly right, or can be controlled, but the most important element in the success of such wintering repositories seems to have been overlooked, and that is that the air in such cellars is much drier than the external atmosphere, even though water be standing on the cellar bottom.

Speaking of pulmonary evaporation, Dr. Carpenter says: "Wholly to suppress it, the air must not only be of extreme humidity, but must also have a temperature not inferior to that of the animal, since, if the air be colder it will be warmed by contact with the body, and thus be capable of holding an additional quantity of aqueous vapor in solution."

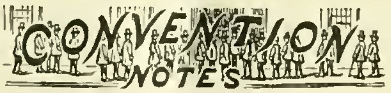
On the same principle the cold air, in its passage through the pipe, will be warmed, and thus become a better absorbent of moisture when it reaches the cellar. For instance, if the temperature of the external air be 15°, in its passage through the pipe, it will be warmed to, say 42°. It should then be just twice as dry as the external atmosphere, because for every addition of 27° to the atmosphere its capacity for moisture is doubled. Last winter a six-inch wooden pipe running 140 feet under ground, brought the air to my cellar at an average of about 40°. On the 24th of January last, at 7 a. m., the temperature outside was 36° below zero. A thermometer in the mouth of the pipe in the cellar stood at 35° above zero; that is, the air in passing through 140 feet of pipe acquired 71° of heat. The humidity must have been many times less, but I had no means of testing it. The success of this method depends a great deal on having the air carried up from the cellar with sufficient rapidity and constancy, and for this purpose the ordinary wood-burning stove is hardly sufficient. It will pay well to take pains to have the exhaust pipe working steadily and vigorously.

Thus, for wintering our bees, we can create an artificial climate, or about the right temperature and humidity, and we can have them surrounded by air just as pure as it is out-doors.

If, in such a cellar, the hives have thick quilts of wool over the clustering space, and the combs raised two or three inches above the bottom board and this space open on at least one side, so as to give full play to the principle of the mutual diffusion of gases, there will certainly be no wet or moldy comb; and if the food is good I think there will be no abdominal distension or dysentery, even if the combs do contain pollen; and experience affords grounds for saying that in the spring the bees will not dwindle any more than bees wintered most successfully on their summer stands.

In making reports as to how bees have wintered, it is desirable that, where accuracy is possible, all the conditions should be accurately given, and as the time to begin taking notes is drawing near, I would suggest the propriety of using a wet bulb hygrometer for determining the humidity. The expense is only trifling, probably less than ten dollars. Any one who understands long division can make the calculations.

Lindsay, Ont., Oct. 17, 1882.



Local Convention Directory.

1882. *Time and Place of Meeting.*

Nov. 29-30, Western Michigan, at Grand, Rapids.
Wm. M. S. Dodge, Sec.

1883.

Jan. 16.—Eastern N. Y., at Albany, N. Y.
E. Quakenbush, Sec., Barnerville, N. Y.

11, Nebraska State, at Wahoo, Neb.
Geo. M. Hawley, Sec.

16-18, Northeastern, at Syracuse, N. Y.
G. W. House, Fayetteville, N. Y.

19, 20.—Mahoning Valley, at Berlin Centre, O.
L. Carson, Pres.

Feb. 3.—Northern Ohio, at Norwalk, O.

April 5.—Utah, at Salt Lake City.
E. Stevenson, Sec.

Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

☞ The Western Michigan Bee-Keepers' Association will meet at Supervisors' Hall, in the city of Grand Rapids, on Wednesday and Thursday, Nov. 29th and 30th, 1882. The co-operation of all bee-keepers of this section is desired.

Wm. M. S. Dodge, *Sec.*

Haldimand, Ontario, Convention.

A meeting of the Haldimand Bee-Keepers' Association was held at Cayuga, Ontario, Canada, on Friday, Oct. 27, at 1 o'clock p. m., the President, E. DeCew, Esq., in the chair. The President explained the object of the meeting, viz: The adoption of a constitution for the association, and election of additional officers.

The constitution was adopted, fixing an annual fee of 50c. for membership,

Present—E. DeCew, President; E. C. Campbell, Secretary; Robt. Buckley, Robt. Anguish, David Anguish, Ambrose Gloyd, James Gloyd, Wm. Harrison, Fred. Mehlenbacheler, Andrew Vanderburgh, B. Byers, Wm. Jack, etc.

The construction of the best kind of hives was discussed by Messrs. DeCew, Vanderburgh, Gloyd, Byers and Buckley, but no result arrived at.

The wintering of bees was discussed by Messrs. DeCew, Gloyd, Vanderburgh, and Buckley, the main essentials being plenty of young bees and stores, and proper protection in winter.

The question of swarming was discussed; the general opinion being in favor of dividing.

The following additional officers were elected for the following townships: Walpole, Wm. Harrison; Seneca, Lawrence Welch; Dunn, Abraham Albright; South Cayuga, Andrew Vasbinder; Rainham, James Gloyd; North Cayuga, Robt. Coverdale; Dunville, Dr. McCallum; Seneca, James T. Nelles.

On motion it was *Resolved*, that the next meeting will be held at Nelles' Corners on the last Friday in March, at 11 o'clock a. m.

A committee, consisting of the President, Secretary, and Mr. Wm. Jack, was appointed to prepare a list of subjects for discussion at the next meeting. E. DeCew, *President.*

E. C. Campbell, *Secretary.*

☞ The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning Co., O., in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th.

Leonidas Carson, *Pres.*

☞ The Nebraska State Bee-Keepers' Association, will hold its annual session in Wahoo, Saunders county, Neb., commencing Thursday, Jan. 11th, 1883. Arrangements have been made with the railroads to secure 1¼ fare for the round trip. The Saunders county Bee-Keepers' Association will furnish entertainment free to all visiting apiarists. Bee-keepers from neighboring States will be welcomed.

T. L. VonDorn, *Pres.*
Geo. M. Hawley, *Sec.*

For the American Bee Journal.

Texas Bee-Keepers' Convention.

The Texas Bee-Keepers' Association held its fourth annual convention at the apiary of Judge W. H. Andrews, at McKinney, Collins county, Texas, April 25-26, 1882.

The Convention met at 9 a. m., under the shade of some fine, ever-bearing mulberry trees, one of which measured twenty-eight inches in circumference, heavily laden with ripe, luscious fruit, as well as berries just beginning to form. The situation was in full view of the Judge's apiary of 300 colonies, of the brightest Italians. On the other hand was a grove of trees, planted by Judge A. many years ago, among which were the poplar, chestnut, sugar maple, and several other fine specimens of deciduous trees, also a choice selection of evergreens.

Thus pleasantly situated, the Convention was called to order by the President, Judge Andrews, who introduced W. K. Marshall, D. D., of Marshall, Harrison county, Texas, as the oldest scientific bee-keeper in the State, and tendered him the chair to preside over the meeting of the convention.

Dr. Marshall delivered an able address on practical bee culture.

He said that many persons would undertake bee culture but for fear of the bee-moth destroying their bees; that anyone who would allow the moth larva to commit destructive depredations, ought to have no bees. He felt friendly toward all bee publications and those engaged in the pursuit, but said that the bee literature of the majority of journals was not adapted to bee culture in the South, the subject of wintering and bee cholera or dysentery consumed nearly one-half of the space; and he thought he spoke the experience of a majority of the scientific bee-keepers in the South when he said that he did not read one-half of the articles on wintering. He had grown tired of so much of it, it did not interest the Southern bee-men.

He had a few cases of dysentery caused by bad feed, several years ago. He had had no experience with foul brood. The only place where it existed in the State was Dallas county. He was often asked if bee-keeping was a success in Texas,—will it pay a reasonable compensation according to capital invested, as compared with other profitable pursuits? His experience was, that a greater income could be realized from the skillful management of the honey bee than from any other pursuit, capital and labor considered.

He advised all to be up with the times, take the best bee periodicals, get the best books, read the best bee literature.

He said that practical bee culture resolved itself into three important factors: Locality, race of bees, and marketing the products of the apiary.

We have good and bad localities. To secure a good locality, we must have an understanding of the honey-producing plants, what produces honey, and at what season? Among the leading honey plants he mentioned were the red bud (Judas tree), the willow, fruit trees, black locust, honey locust, ratan vine, corn and cotton; he was convinced that a large portion of his honey was from cotton. He gave some very valuable statistics of the honey crop for the past thirty years. In 1860, he said that the honey yield was enormous, almost incredible. The yield was mostly from honey dew, which exuded from the leaves. He saw 400 lbs. of honey taken from one tree at one time. He had never before, nor since, seen such a season. He spoke of Red River and Sulphur bottoms as being excellent localities for apiaries.

He spoke at length of the improved races of bees, and stated that by careful breeding they could be brought to a higher standard, and he regarded the home-bred queen as superior and discouraged the further importation of new races other than the Italians, and even some of these were not well marked. He regarded the pure Italians as superior to any other race. Their docility and capacity for storing honey were objects of much respect.

He gave an interesting account of his experience with the Cyprian bees. They were very prolific, and good honey gatherers, but consumed the most of their stores in brood-rearing. They must be made queenless in order to obtain surplus. They would become infested with laying workers in three days after the removal of the queen—were swift flyers and *stingers*.

To beginners, he would advise the buying of good colonies to commence with, and consider what kind of honey to produce, and to produce that kind, comb or extracted, which would find a ready home market.

He considered the 8-frame Langstroth hive the best size for surplus. In marketing honey, his own experience was in favor of extracted honey; comb honey would not bear shipping. Extracted honey was more wholesome to the consumer and more economical to the producer. He considered some bees lazy, while others were industrious; had tried tiering-up to four stories high, with upper chamber over the brood chamber, and obtained 86 lbs. of extracted honey by the tiering plan, against 130 lbs. for the ordinary 2-story hive; he had easier access to the brood-chamber with the latter than the former. He encouraged building up a home market; he had sold, last fall, 4,000 lbs. of honey, at home. He considered Texas equal to any other State for its natural honey resources.

He opposed, in the strongest terms, the unjust and malicious attacks made by unprincipled men upon the character of the father of American bee literature—Rev. L. L. Langstroth, and regretted that any of the bee periodicals should give space in their publications for such malignancy.

The Association tendered a vote of thanks to Dr. Marshall for his able and interesting address.

The following committees were appointed:

On Resolutions—Dr. Howard, Jno. S. Kerr and G. R. Cooper.

On Apiarian Supplies and Exhibits—R. C. Horn, T. C. Boone and G. A. Wilson.

On Subjects for Discussion—W. K. Marshall, F. P. Cline and Judge T. C. Goodner.

Judge W. H. Andrews gave an interesting account of his visit to Lexington, Ky., as delegate from Texas to the North American Bee-Keepers' Society. He was highly pleased with the acquaintance made with the distinguished bee-masters of America whom he met there, and spoke in the highest terms of the ladies who participated in the convention and took such a great interest in bee culture. The manner in which the representative from Texas was received, and the attention given the Texas delegate was encouraging to the Society of Texas; which, though young as an organization, attracted much attention in the older States.

On motion, the Convention adjourned till 1:30 p. m.

AFTERNOON SESSION.

Committee on Subjects for Discussion reported the following questions: "Which is most desirable—natural or artificial swarming?"

Dr. Marshall was selected to open the discussion. He favored artificial swarming; his apiary being located among large forest trees, natural swarming was impractical with him. He could increase artificially with less labor than natural swarming.

Judge Andrews favored natural swarming, he thought that his bees went to work with more spirit and zeal when allowed to swarm naturally.

Judge Goodner gave his experience with artificial swarming, as a novice. He succeeded in dividing his bees; received something less than 40,000 stings; it was his first effort, therefore he had not decided which plan he would adopt in the future.

The next subject for discussion was "Is it advisable to plant for honey?" Judge W. H. Andrews favored planting for honey, and recommended black locust. It was valuable for honey and the timber was useful and demanded a good price in the markets; it was a fast grower and a profuse bloomer.

Dr. W. K. Marshall was in favor of planting black locust, peas, Simpson's honey plant, and linden for honey. He stated that some peas yielded more honey than others, which was owing, perhaps, to the depth of the corolla of the flower, the nectar being secreted beyond the reach of the bee.

G. A. Wilson asked if it would pay to plant sweet clover (melilot).

Judge Andrews said that he had had it growing for several years, and had noticed, only occasionally, a stray bee upon it, but it was highly recommended by good authority.

Dr. Howard had grown it, and found his bees to work on it after horse-mint had dried up, and that it furnished a fine quality of honey, well flavored. He recommended planting and cultivating the first year, as it was to stand.

He was asked if it would do to cultivate the first year and transplant.

He gave his experience with transplanting a few thousand, year-old plants, that had been cultivated. He said that it took two pair of oxen to plow it up, and then a furrow had to be opened on either side of the row, and the plants plowed, or rather cut off, leaving most of the roots in the ground; that the laterals were very numerous and strong, and were three or four feet in length, and often an inch in diameter; the tap-roots were as large and perhaps as long. He dug two wagon loads of roots from the rows and left half of them in the ground. He plants an acre of ground from a pound of seed in this way, but considered too much unnecessary labor. He was asked if stock would eat it. He thought they would not; as they had free access to it, both cattle and horses, and had never seen anything eat it.

He was asked if there were more than one kind of it.

He said that two species were described, and by some three.

Dr. Marshall stated that horse-mint did not grow in his locality, asked what time it bloomed.

Dr. Howard answered that it usually commenced rather after the 20th of May, and lasted, when seasonable, over forty-five days, but that this year it would commence the first week in May, before the ratan vine was done, and it lasted, usually, more than forty-five days.

"Is the bee moth an enemy to the culture of the honey-bee?" was next discussed.

Dr. Marshall remarked that no one need to fear any losses from the ravages of the moth worm, if he kept strong colonies; that the worm would injure combs if allowed free access to them, could not be denied, but that no one need fear destruction. He thought that the Italians were more vigilant, and more apt to protect their homes against its ravages than were the blacks.

Judge Andrews said that the bee-moth was not to be feared among scientific bee-keepers, that all moth-proof hives and their vendors were humbugs. He spoke in positive terms against moth-traps.

Dr. Howard said that the natural food of the moth larva was wax, and not bees or honey, and that during the spring and summer months beeswax was liable to become infested with these larvæ, if exposed, and he regarded them as an enemy to bee-culturists, as they certainly destroy wax, and this article is becoming one of great importance. That comb honey should be noticed occasionally and fumigated with sulphur to destroy the larvæ; that strong colonies was the key-note to the successful protection of the hive—that a hive giving at all times free access to every part, furnished with a full colony of bees, with a vigorous laying queen, was absolutely moth-proof so far as the injurious inroads of this insect was concerned.

"The best method of transferring bees from old boxes to movable frame hives," was next discussed. Dr. Howard read an essay on "transferring bees," in which he gave the *modus operandi* at length.

"The best method of marketing honey" was next discussed.

Dr. Marshall thought that the cultivation of a home market was advisable, and should be encouraged. He had sold 4,000 lbs. at home, last fall.

All favored the cultivation of a home market, and putting up honey in an attractive shape, and convenient size, to suit the purchaser.

Adjourned till 9 a. m., to-morrow.

SECOND DAY—MORNING SESSION.

The meeting was called to order by Dr. Marshall. Judge W. H. Andrews read an essay on "bee literature—what it is and what it should be," in which he stripped the literature of the present, of its fallacies, its "fine spun theories" and aerial speculations, and dealt fairly and squarely with solid facts, and claimed that all deductions should be based upon the same solid basis. It was highly interesting.

The committee on subjects for discussion reported the following:

What is the best mode of Italianizing an apiary?

Judge Andrews gave his views and condemned the method described in the books. He then asked Dr. Howard to answer the question he had asked him to answer in the AMERICAN BEE-JOURNAL, to wit:

"Does the Dzierzon drone theory necessarily follow from the establishment of the much cherished idea of parthenogenesis?"

Dr. Howard answered the question, but the Judge rather accused him of being on the fence. The doctor said it was, to the scientific mind, a mooted point. He gave in detail many interesting experiments with bees. The anatomy of the queen under different circumstances, as revealed by the aid of the microscope, he dwelt on at length; all of which was interesting.

[For answer to Judge Andrews' question, see—"Review of the Dzierzon Theory," AMERICAN BEE-JOURNAL, Vol. xviii, p. 277.—SEC.]

The Judge admitted parthenogenesis so far as related to the production of drones from unfecundated mothers and no further. He related several interesting experiments in the breeding of other stock—cattle and hogs.

Is it advisable to import other races of bees than Italians? was discussed. It was the general expression that the Italians were superior to any other race yet introduced, all things considered; and the importation of other races was advisable.

AFTERNOON SESSION.

The election of officers for the ensuing year was held, which resulted as follows:

President—W. H. Andrews, of McKinney.

Vice President—W. K. Marshall, of Marshall.

Secretary—W. R. Howard, Kingston.

Treasurer—F. P. Cline, Mesquite.

Resolutions were passed, thanking Judge Andrews and the citizens of McKinney for hospitality; expressing sympathy with the Rev. L. L. Langstroth in his affliction; and thanking Dr. Marshall for his kind assistance and presence, and the exhibitors of apiarian supplies.

Adjourned to meet in April, 1883.

WM. R. HOWARD, *Sec.*

[The foregoing report has but just reached this office, on account of the Secretary being unable sooner to prepare it for publication.—ED.]

SELECTIONS FROM OUR LETTER BOX

My Season's Work.—Bees are still working on mignonette and some drones are yet in the hives. Spring count, I had 17 colonies starving, I have now 57 colonies rich in honey; 3 being from the woods. My surplus is between 1,200 and 1,500 lbs. honey, one-half comb and half extracted. I am selling the comb at 20c; extracted at 25c. I received a package of Golden Honey Plant seed from Dr. Tinker, he having learned that seed purchased last spring failed to grow.

WM. CAMM.

Murraysville, Ill., Nov. 9, 1882.

My Report for 1882.—Number of colonies in the spring, 8 good and one weak; the good ones were as good or better as when they went into winter quarters; the weak one had a good young queen, but not one pint of bees. I built it up with brood from strong colonies. The early spring was good for bees, but April was cold and wet. I had to feed some to keep them breeding; fruit bloom did not amount to much, as we had some hard frosts, which killed it. White clover came on in due time and continued in abundance until September, but think that it did not yield much honey; just enough to keep bees breeding all the summer. Swarming commenced June 12, and they kept it up until September. Bees were stronger in numbers, but gave very little surplus honey. I winter them on the summer stands, packed in dry sawdust, 6 inches all around the hive and on top, and lost none. My increase by swarming was 21, and I put back 12 or 15 swarms. In September I doubled down to 21. I have now on the summer stands 5 packed in sawdust, same as last winter, 16 in double walled brick hives, with dead air space of one-inch between the brick walls; on the top, a cover of old carpet, and on that one foot of dry sawdust, covered with a good shingle roof. The idea of brick hives I obtained from the BEE-JOURNAL, but what number, or who wrote on the subject, I do not know, whoever it was, only spoke of brick hives and gave no description. So far I like them, but I may hate them next spring. One of our bee-keepers is brimstoning about one-half of his bees and taking the honey. Murder! murder!

ABE HOKE.

Union City, Ind., Nov. 5, 1882.

Packing Bees in Chaff.—Replying to the query on page 684 of W. W. Moore, of Gillette's Grove, Iowa, I would say that either through an error in writing, or through a misprint in the Canadian *Farmer*, my essay was not quite as intelligible in that portion of it as it might have been. It should have read :

"Then remove the cover and place on top of quilt, a cushion large enough to cover the frame, and containing about four inches thick of sawdust."

The better plan when using cushions is to have platforms or shelving, one above another, on the wall, and far enough apart to allow the hive, with cushion, to be set in ; if, however, this method cannot easily be adopted, the strips can be placed upon the cushions, as described in my essay.

H. Couse.

Beeton, Ont., Nov. 6, 1882.

Satisfactory.—My bees have done very well this season ; they have increased 100 per cent., and I have taken 52 lbs. of honey per colony, nearly all in sections, which sold readily at 30c. per lb. My hybrids gave me the most honey, and the Italians the most increase. I get all my increase by natural swarming ; and all are now in good condition for winter. I shall winter some in the cellar, and the others packed on the summer stands.

M. H. Wolfer.

Richmond, Ind., Nov. 4, 1882.

What Is It?—I inclose a peculiar kind of bug. Please give name. I can say that I have seen the silver lining edged with gold. I have still more honey to take off, as soon as the weather will permit.

W. G. McLendon.

Lake Village, Ark., Sept. 9, 1882.

[The bug was duly received, and sent to Prof. Cook for name, but we fear it was lost in the mails, as we have never heard anything of it.—Ed.]

A Partial Report.—I had two small apiaries to care for this season. One was at my home in the village and the other (Mrs. Wirt's), a half mile from town, and a mile from where I reside. I did not keep an account of the yield from the home apiary, which consisted of 20 colonies, but am quite certain that I did not get quite as much honey as from the Wirt apiary, which numbered 19 colonies, spring count. I increased this apiary to 44 colonies by natural swarming, and as many as a half dozen swarms went to the woods. From this apiary I harvested just 2,000 pounds of comb honey, mostly in 2 lb. sections, and 600 lbs. of extracted. I used no foundation in the brood chamber, and only small starters in the sections ; and some of the colonies had to be built up from six frames, with no honey, and being rather light in bees. Taking all the conditions into consideration, I believe I have no reason to complain of the result. My bees are all in excellent condition for winter, and I hope to get them through their long period of inactivity well prepared for the next season's campaign. I propose using foundation quite freely next season, if all goes well. Our honey is excellent and the home demand is good. I got one of Mr. Heddon's 8-frame Langstroth hives to try, and am of the opinion that I shall adopt it as my standard hive. I never like to jump at conclusions, but think it is the very hive I have been looking for. This year, as last, my best workers were a cross between the Italian and the black, or German bees.

J. R. Baker.

Keithsburg, Ill., Nov. 7, 1882.

Averaged 100 lbs. of Honey per Colony.—I commenced in the spring with 40 colonies of bees in fair condition. On the early-spring honey-flow I made all strong, and had my swarming on the ratan vine honey-flow, and all good and strong by the time our horsemints came in, which was earlier this season than usual, connecting with the ratan-vine harvest. The season has been a good one in this portion of Texas. My entire apiary averaged 100 lbs. of extracted honey, per colony. My best colony gave one swarm, and the proceeds of both was a little over 400 lbs. of extracted honey. The fall harvest was good, and the honey was of better quality than usual. The honey plants furnishing our fall honey are different from what they have been heretofore, and the outlook for the future fall honey crop is favorable for a better quality of honey, if not a greater quantity. I now have about 90 colonies in good condition.

Wm. R. Howard.

Kingston, Texas, Nov. 4, 1882.

To Prof. A. J. Cook.—Will you be kind enough to state in the American Bee Journal who made the Given foundation which you stated sagged so badly in your tests this summer? This is a matter that concerns *all* users of foundation, and I feel sure very many would be interested to know if the sagging is the result of an inherent defect in that make of foundation, or whether it was faulty manufacture?

T. L. VonDorn.

Omaha, Neb., Nov. 4, 1882.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

☞ When changing a postoffice address, mention the *old* as well as the new address.

◆

☞ The New York Weekly *Tribune* says in regard to the Noyes Dictionary Holder, manufactured by L. W. Noyes, 99 West Monroe St., Chicago: "We know of but one satisfactory Holder ; that, however, is so good that a second is not needed." Mr. Noyes sends to all applicants a handsome illustrated circular. Prices reduced.

Honey and Beeswax Market.

Office of American Bee Journal,
Monday, 10 a. m., November 13, 1882.

The following are the latest quotations for honey and beeswax received up to this hour :

Quotations of Cash Buyers.

CHICAGO.

HONEY—The supply of extracted honey is fully up to the demand. My quotations are : 6½c. for dark and 8½c. for light, delivered here.

BEESWAX—It is quite scarce. I am paying 27c. for good yellow wax, on arrival ; dark and off colors, 17@22c.

Al. H. Newman, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 16@20c. on arrival ; extracted, 7@10c. BEESWAX—Firm at 20@25c. per lb.

Chas. F. Muth.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand increases with the cool weather, but not sufficiently fast to keep pace with receipts, which now accumulate, as it is time to get the surplus into market. Prices remain unchanged with perhaps a tendency downward, owing to many consignors desiring to realize quickly.

We quote: white comb, in small sections, 18@20c. Fine, well-filled, 1 lb. sections bring the outside price. Dark comb honey, little demand, 15@16c. Light honey, in larger boxes, 12@16c. Extracted—white clover, 9½@10c.; dark, 8@9c., in barrels and half-barrels. Kegs will bring but a small advance, if any, above half-barrels.

BEESWAX—Very scarce. Choice Yellow, 30c.; dark to fair, 20@24c.

R. A. Burnett, 165 South Water St.

SAN FRANCISCO.

HONEY—There is considerable amber and dark and candied extracted offering. A small sale of light amber, in barrels, was made at 9c. For dark and candied extracted 7½c. is a full figure.

White comb, 18@20c ; dark to good, 12@15c ; extracted, choice to extra white, 9@10c.; dark and candied, 7½c.

BEESWAX—We quote 25@28c.

Stearns & Smith, 423 Front Street.

ST. LOUIS.

HONEY—Plentiful and slow. We quote, in lots, comb at 15@17c ; strained at 6@7c.; extracted at 9@10c.

BEESWAX—Prime bright quotable at 26@27c.

R. C. Greer & Co., 117 N. Main Street.

CLEVELAND.

HONEY -The demand for comb honey, in sections, continues very good, at the following prices: Best quality white, in 1 ℔ sections, sells for 21@22c. per pound, in attractive packages. Same quality, in less attractive shape, 20@21c. In 1½@2 lb. sections, white, best quality, 19@20c. Second quality, of all grades, sells about 2 cents ℘ lb. less. Extracted, in small packages, tin pails and cans sells at 12@15c.; but extracted, in barrels, is slow at 9@12c.

BEESWAX—Prime quality, 25@28c.

A. C. Kendel, 115 Ontario Street.

NEW YORK.

HONEY—The arrivals of honey are light, and some fancy lots held above quotations, but the actual demand is very slow.

We quote: White clover, fancy, small boxes, 19@20c ; white clover, fair to good, 16@18c. Buckwheat, 13@16c.

BEESWAX—The supply of wax has been more liberal the past week, and 29@30c. about top prices for large cuts, though in a small way sales are reported 1@2c. higher.

Western, pure, 29@30c ; Southern, pure, 30@31c.

D. W. Quinby, 105 Park Place.

BOSTON.

HONEY—Sells very readily in 1 lb. sections at 22@25c. for best white, and 20@22c. for 1½ to 2 lb. Boxes containing ½ pound, 30c. per pound. Extracted is selling very slowly at 12@14c.

BEESWAX—25@26c.

Crocker & Blake, 57 Chatham Street.

Oldest Bee Paper in America
THE AMERICAN
BEE JOURNAL
Established in 1861

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance. Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance :

For **4** weeks..................**10** per cent. discount.
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Discount, for **1** year, in the SEMI-MONTHLY alone, **40** per cent., — **6** months, **20** per cent.— **3** months, **10** per cent.—if wholly paid in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ A few of our subscribers are in arrears for the present year—having requested us to continue, and they would pay soon. Will all such please take this as a request to send on the two dollars with a renewal for next year, if possible.

◆

☞ The Amerian Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 60
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper........	2 60..	2 40
The 6 above-named papers.......	6 00..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881...............	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

The Monthly **Bee Journal** and any of the above, $1 less than the figures in the last column.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞ Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

◆

Kendall's Spavin Cure is used from the Atlantic to the Pacific coast.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly is now permanently established, and will be continued as heretofore.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

◆

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

Every lady should send 25 cents to Strawbridge & Clothier, Philadelphia, and receive their *Fashion Quarterly* for six months. 1,000 illustrations and four pages new music each issue.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

—"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1wly.

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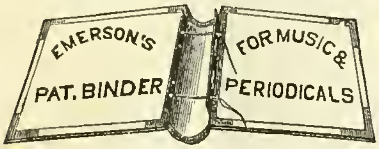
AND KEEP THEM

NEAT AND CLEAN.



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IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Monthly Bee Journal..............**50c.**
For Weekly Bee Journal................**75c.**

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

DARWINISM with its theory of the evolution of man from the animals and his extinction at death overthrown. A personal God and an eternal existence for man proven by *science*. Infidelity and Materialism dethroned. The *Wave theory* of Sound, taught in colleges and high schools for 2,000 years, proven to be a stupendous scientific fallacy. Revolutionary in Science and the most remarkable book of this or any other age. Royal Octavo, 528 double column pages, handsomely bound and containing very superior likenesses of the great scientists of the age. Darwin, Huxley, Hemholtz, Mayer, Tyndall and Haeckel. $2, by mail, postpaid. Local and Travelling Agents Wanted. Circulars, with table of contents and "opinions of the press," and of Clergymen, Professors in Colleges, etc., free to all.

SCHELL & CO., 52 Broadway, N. Y.

PLYMOUTH ROCKS EXCLUSIVELY

VERY FINE EXHIBITION BIRDS, and

Trios Mated for Breeding;

Also, SINGLE BIRDS.

Prices reasonable. Correspondence cheerfully answered. **WM. H. BUSSEY,**
38smtf 131 Lake St., CHICAGO, ILL.

HEADQUARTERS FOR THE

Golden Italians & Original Albinos,

BEES AND QUEENS.

Send for Circular. **J. M. C. TAYLOR,**
10smtf Lewistown, Frederick Co., Md.

Fruit Evaporators,

To be used on a common cooking stove, capacity 3 to 5 bushels per day. Price, complete, $10; in the flat, partly put together, for $6. A few agents wanted. For particulars and prices for Evaporators, Queen Bees, etc., address

JOHN H. MARTIN,
9smly Hartford, Wash. Co., N. Y.

LIVE BEE-KEEPERS WANTED,

to introduce the new lime cushion, the only protection yet discovered that will carry the bees safely through winter and spring without fail. Send $50, for right to retail this cushion in your county, or send $5 for one apiary right to patentee.

F. DELLA TORRE,
Reisterstown, Baltimore co., Md.

Remit by registered letter or P. O. order.
Patented April 25, 1882. No. 254,932. 45w13t

HONEY AND BEESWAX.

ALFRED H. NEWMAN,

WHOLESALE AND RETAIL DEALER IN

BEE-KEEPERS' SUPPLIES,

INCLUDING

Honey and Wax Extractors, Comb Foundation, Sections, Kegs and Pails for Honey, Seeds for Honey Plants, etc.,

923 WEST MADISON STREET,

CHICAGO, ILLINOIS.

Illustrated Catalogue sent free upon application.

BEESWAX.

I wish to buy a quantity of good yellow Beeswax. I am paying **27c.** per pound, delivered here, Cash on arrival. Shipments solicited.

To avoid mistakes, the name of the shipper should always be on each package.

ALFRED H. NEWMAN.
923 West Madison Street, CHICAGO, ILL

A NEW BEE BOOK!

Bees & Honey

OR THE

Management of an Apiary for Pleasure and Profit; by

THOMAS G. NEWMAN.

Editor of the Weekly Bee Journal.

It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents**; in paper covers, **50 cents,** postpaid.

925 W. Madison Street, Chicago, Ill.

Appreciative Notices.

Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

Carefully prepared, and of vast importance to bee-raisers.—Indianian, Clinton, Ind.

A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

New and valuable, and embellished with 109 beautiful engravings.—Democrat, Salem, Ind.

Much practical useful information, in a cheap form.—Daily Standard, New Bedford, Mass.

Contains all the information needed to make bee-culture successful.—Eagle, Union City, Ind.

Just such a work as should be in the hands of every beginner with bees.—News, Keithsburg, Ill.

A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

The most perfect work for the price ever yet produced on the subject of bee-culture.—Anti-Monopolist, Lebanon, Mo.

The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment.—Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

Embraces every subject of interest in the apiary, giving very thorough details of the management and manipulations necessary to make bee-keeping a success.—Farm. Longmont, Colo.

Written in an interesting and attractive manner, and contains valuable information for all readers, even though they be not directly interested in the care of bees.—Sentinel, Rome, N. Y.

It is a valuable and practical book, and contains a complete resume of the natural history of the little busy bee, as well as of all that one needs to know in their care and management.—Chicago Herald.

Describes all the newest discoveries in the art, by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive shape.—Signal, Napoleon, O.

Contains a vast fund of information in regard to bee-culture. He who would keep abreast of the times must keep posted in all the improvements in his line. We advise all interested to get a copy of this book.—Daily Times, San Bernardino, Cal.

It embraces every subject that will interest the beginner. It describes all the newest discoveries in the art by which the production of delicious and health-giving honey is obtained, as well as how to prepare it for the market in the most attractive form. It is embellished with beautiful engravings, and is the most perfect work of the kind, for the price, that has ever come under our notice.—Farmer, Lancaster, Pa.

☞ **A Liberal Discount to Dealers by the Dozen or Hundred.**

BEESWAX

WANTED.

State Quantity, Price and Quality.

CHAS. DADANT & SON,
Hamilton, Hancock Co. Ill.

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
13wtf Abronia, Mich.

SWEET CLOVER SEED,

This year's crop, all of the white variety, 28c. per pound ; $3.75 per peck ; **$13.00** per bushel.

☞ I can fill no more orders for Queens this fall, having sold all I had to spare, leaving many orders unfilled, and with orders still coming in. The advertisement in the Weekly Bee Journal did it.

I. R. GOOD,
5wly Nappanee, Elkhart Co., Ind.

Excelsior Dunham and Vandervort *FOUNDATION.*

Owing to the large advance in the price of wax, I now quote prices thus : Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

J. V. CALDWELL,
3wly Cambridge, Henry Co., Ill.

LULING, TEXAS,

Is now headquarters for the sale of FINE ITALIAN QUEENS AND BEES. The nicest bee hives. 10,000 feet of seasoned Cypress lumber now on hand for the winter's work ; also, everything used by modern bee-keepers. Write for prices.
BEESWAX WANTED.
14w39t **J. S. TADLOCK.**

HONEY.

As I do not sell honey on commission, and buy only such kinds as I need in my line of trade, I cannot accept any shipments without previous correspondence.

I can sell Beeswax of any quality, and will pay the regular market price for it, in any quantity, or exchange for it comb foundation, without previous correspondence.

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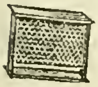

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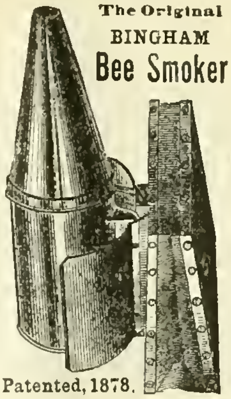

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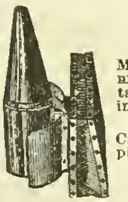

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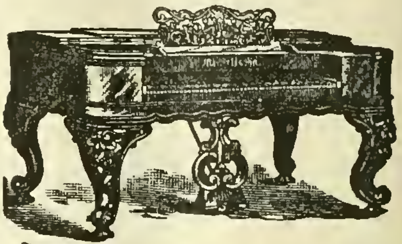

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items........ 737
Another Editorial Change........ 737
Sir John Lubbock's New Book on Bees.... 738
Bees Finding Honey........ 738
How They Find Their Way........ 738
Bees Recognizing One Another........ 739
Bees Losing their Sting........ 739
Evidence of Affection in Bees........ 739
Bees Sense of Hearing........ 739
The Color Sense of Bees........ 739

Among Our Exchanges—

Bee-keeping in Maine........ 740
Food Adulterators........ 740

Correspondence—

How I Built My Cellar........ 741
Wintering Bees in Chaff........ 741
Syrian or Holy-Land Bees........ 742
Bees for Business—A Report........ 742
Development of "The Coming Bees"...... 743
Bee Notes from Iowa........ 744
Revolving Frame Holder........ 744

Convention Notes—

Local Convention Directory........ 745
Convention Notices........ 745
West Texas Convention........ 745
Queen Rearing and Honey Producing..... 745

Selections from Our Letter Box—

A Home Market........ 745
That 1000 lbs. of Honey from 1 Colony.... 745
Cold Wave........ 745
And Still Sweet Clover is Blooming........ 746
Bee-Keeping in Canada........ 746
Comb Foundation........ 746
My Little Report........ 746
Packing My Bees........ 746
Small Wire Worms in Pollen........ 746
Moving Bees, etc........ 747
Quick Work........ 747

Another Editorial Change.—On the first of January next, the *British Bee Journal* is to change hands. The present editor, Mr. C. N. Abbott, who has done very much to encourage and advance the interests of bee-keepers in Great Britain, will retire, and the Rev. Herbert R. Peel, the honorary secretary of the British Bee-Keepers' Association, will be duly installed as its editor. While extending our congratulations to Mr. Abbott for his able management in the past, we welcome the new editor, Mr. Peel, through whose exertions the British Bee-Keepers' Association has been made so much of a success.

◆

☞ Mr. James Anderson, the apiarist from Scotland, who is on his way home now, after a tour of this country for the past 4 months, called at the BEE JOURNAL office last Thursday. He goes to New York, and thence to Glasgow, where he will, no doubt, be welcomed home by the Caledonian bee-keepers, among whom he is one of the most progressive and successful.

◆

☞ Mr. George Doolittle, of Bridgeport, Conn., has sent us some fasteners for holding the wires in frames, which he desires us to place in the BEE JOURNAL Museum, for the inspection of visitors, which we have cheerfully done. They consist of small links of a metal chain cut in two so as to form little staples.

◆

☞ We had a pleasant call from Mr. O. O. Poppleton, of Williamstown, Iowa, on Friday last. He was on his way to Florida, to spend the winter.

☞ Jordan's White Sulphur Springs, we notice by the *Baltimorean*, is to undergo many valuable improvements during the winter. Mr. Jordan, who is one of the most thorough and progressive apiarists in Virginia, is also the very popular proprietor of the "Springs," which is one of the leading summer resorts of the Southeast. We have received an invitation to spend a few weeks there next summer, and should be delighted to accept, could we leave the office for so long.

◆

☞ We notice a very complimentary item in the Union City, Ind., *Eagle*, showing a correspondent's appreciation of the BEE JOURNAL, and the benefit it has been to him in the management of his bees.

◆

☞ The Quarterly Report of the Kansas State Board of Agriculture, for the quarter ending September 30, has just been issued.

The report contains the acres and product of principal crops, by counties, accompanied by market quotations of the Kansas City market for each month from January, 1877, to September, 1882, for the crops of wheat and corn and can be obtained by addressing the Secretary, Wm. Sims, Topeka, Kansas, and inclosing the necessary postage, three cents.

◆

☞ Honey, according to A. Vogel, says the *Scientific American*, contains on an average one per cent of formic acid. Observing that crude honey keeps better than that which has been clarified, E. Mylius has tried the addition of formic acid, and found that it prevents fermentation without impairing the flavor of the honey.

◆

☞ Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

Sir J. Lubbock's New Book on Bees.

Ants, Bees and Wasps. A Record of Observations, on the Habits of Social Hymenoptera. By Sir John Lubbock, M. P., F. R. S., etc, New York: D. Appleton & Co. 1882. Price, $2.00.

We have received from the publishers the above work for review in the American Bee Journal.

As stated by the author, it is a "record of observations" which were, doubtless, made with much care, but not for the purpose of sustaining any theory regarding them, but to ascertain existing facts. In his preface, the author says: "My object has been not so much to describe the usual habits of these insects as to test their mental condition and powers of sense." And, in another place, he says: "I have endeavored, therefore, by actual experiments, which anyone may, and I hope others will, repeat and verify, to throw some light on these interesting questions."

But few scientific workers have spread their interests over so wide a field as Sir John Lubbock; but we may easily discover that a thread of continuity runs through all of them. His researches into the habits of bees, wasps and ants, deal with the evolution of social communities from the lower types of life. He holds that the ants are the nearest to man in social organization and general intelligence, though the apes are nearer in bodily structure. Ants even show some indication of progressive development among themselves. Some of them live by the chase, as do hunting savages; others, more highly evolved, resemble the pastoral races of men, because they have domesticated the aphides; the harvesting ants have risen still higher in civilization, and reach the agricultural man. He finds in their nests, analogy to human societies, in their marked division of labor, their elaborate architecture, their regular roadways, and in their peculiar institution of slavery. In some of these things, bees, also, show their near approach to man's intelligence.

At first, Sir John Lubbock intended to confine his experiments to bees and wasps, but he found these insects with wings were unpleasantly excitable in temper and could easily elude his watchfulness. This led him to deal more particularly with the ants, which were much easier to observe from every point of view.

Hour after hour did the author watch his bees and wasps with unceasing care, and he has recorded their movements with minuteness in this volume.

The author thinks that bees and ants have, in their antennæ, some means of communication with one another. His experiments on the perception of color by the bees show that they can distinguish all the hues as well as can man, and these observations will, in some measure, at least, account for the origin and development of the prismatic hues of flowers.

In order to show the author's experiments in detail on many mooted points, we will here give some extracts from Chapter X. Sir John Lubbock says:

> As already mentioned, the current statements with reference to the language of social insects depend much on the fact that when one of them, either by accident or in the course of its rambles, has discovered a stock of food, in a very short time many others arrive, to profit by the discovery. This, however, does not necessarily imply any power of describing localities. If the bees or ants merely follow their more fortunate comrade, the matter is comparatively simple; if, on the contrary, others are sent, the case becomes very different.
>
> In order to test this I proposed to keep honey in a given place for some time, in order to satisfy myself that it would not readily be found by the bees; and then, after bringing a bee to the honey, to watch whether it brought others, or sent them—the latter of course implying a much higher order of intelligence and power of communication.
>
> I therefore placed some honey in a glass, close to an open window in my sitting-room, and watched it for sixty hours of sunshine, during which no bees came to it.
>
> I then, at 10 a. m., on a beautiful morning in June, went to my hives, and took a bee which was just starting out, brought it in my hand up to my room (a distance of somewhat less than 200 yards), and gave it some honey, which it sucked with evident enjoyment. After a few minutes it flew quietly away, but did not return; nor did any other bee make its appearance.
>
> The following morning I repeated the same experiment. At 7:15 I brought up a bee, which sipped up the honey with readiness, and after doing so for about four minutes flew away with no appearance of alarm or annoyance. It did not, however, return; nor did any other bee come to my honey.
>
> On several other occasions I repeated the same experiments with a like result. Altogether I tried it more than twenty times. Indeed, I rarely found bees to return to honey if brought any considerable distance at once. By taking them, however, some twenty yards each time they came to the honey, I at length trained them to come to my room. On the whole, however, I found it more convenient to procure one of Marriott's observatory hives, both on account of its construction, and also because I could have it in my room, and thus keep the bees more immediately under my own eye. My room is square, with three windows, two on the southwest side, where the hive was placed, and one on the southeast. Besides the ordinary entrance from the outside, the hive had a small postern door opening into the room; this door was provided with an alighting-board, and closed by a plug; as a general rule the bees did not notice it much unless the passage was very full of them.
>
> I then placed some honey on the table close to the hive, and from time to time fed certain bees on it. Those which had been fed soon got accustomed to come for the honey; but partly on account of my frequent absence from home, and partly from the difficulty in finding their way about, and their tendency to lose themselves, I could never keep any marked bee under observation for more than a few days.......I might give some other similar cases, but these are, I think, sufficient to show that bees do not bring their friends to share any treasure they have discovered, so invariably as might be assumed from the statements of previous observers. Possibly the result is partly due to the fact that my room is on the top floor, so that the bees coming to it flew at a higher level than that generally used by their companions, and hence were less likely to be followed.
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> Indeed, I have been a good deal surprised at the difficulty which bees experience in finding their way.
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> For instance, I put a bee into a bell-glass 18 inches long, and with a mouth 6½ inches wide, turning the closed end to the window; she buzzed about for an hour, when, as there seemed no chance of her getting out, I put her back into the hive. Two flies, on the contrary, which I put in with her, got out at once. At 11:30 I put another bee and a fly into the same glass: the latter flew out at once. For half an hour the bee tried to get out at the closed end; I then turned the glass with its open end to the light, when she flew out at once. To make sure, I repeated the experiment once more, with the same result.
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> Some bees, however, have seemed to me more intelligent in this respect than others. A bee which I had fed several times, and which had flown about in the room, found its way out of the glass in a quarter of an hour, and when put in a second time came out at once. Another bee, when I closed the postern door which opened from my hive directly into my room, used to come round to the honey through an open window.
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> One day (April 14, 1872), when a number of them were very busy on some berberries, I put a saucer with some honey between two bunches of flowers; these flowers were repeatedly visited, and were so close that there was hardly room for the saucer between them, yet from 9:30 to 3:30 not a single bee took any notice of the honey. At 3:30 I put some honey on one of the bunches of flowers, and it

was eagerly sucked by the bees; two kept continually returning till past five in the evening.

One day, when I came home in the afternoon, I found that at least a hundred bees had got into my room through the postern and were on the window, yet not one was attracted by an open jar of honey which stood in a shady corner about three feet five inches from the window.

Another day (April 29, 1872), I placed a saucer of honey close to some forget-me-nots, on which bees were numerous and busy; yet from 10 a. m. till 6 only one bee went to the honey.

I put some honey in a hollow in the garden wall opposite my hives at 10:30 (this wall is about five feet high and four feet from the hives), yet the bees did not find it during the whole day.

On March 30, 1873, a fine, sunshiny day, when the bees were very active, I placed a glass containing honey at 9 in the morning on the wall in front of the hives; but not a single bee went to the honey the whole day. On April 20 I tried the same experiment with the same result.

September 19.—At 9:30 I placed some honey in a glass about four feet from and just in front of the hive, but during the whole day not a bee observed it.

As it then occurred to me that it might be suggested that there was something about this honey which rendered it unattractive to the bees, on the following day I first placed it again on the top of the wall for three hours, during which not a single bee came, and then moved it close to the alighting-board of the hive. It remained unnoticed for a quarter of an hour, when two bees observed it, and others soon followed in considerable numbers.

It is generally stated not only that the bees in a hive all know one another but also that they immediately recognize and attack any intruder from another hive. It is possible that the bees of a particular hive have a particular smell. Thus Langstroth, in his interesting Treatise on the Honey Bee, says, "Members of different colonies appear to recognize their hive companions by the sense of smell;" and I believe that if colonies are sprinkled with scented syrup they may generally be safely mixed. Moreover, a bee returning to its own hive with a load of treasure is a very different creature from a hungry marauder; and it is said that a bee, if laden with honey, is allowed to enter any hive with impunity. Mr. Langstroth continues: "There is an air of roguery about a thieving bee which, to the expert, is as characteristic as are the motions of a pickpocket to the skillful policeman. Its sneaking look and nervous guilty agitation, once seen, can never be mistaken." It is at any rate natural that a bee which enters a wrong hive by accident should be much surprised and alarmed, and would thus probably betray herself.

So far as my own observations go, though bees habitually know and return to their own hive, still, if placed on the alighting-board of another, they often enter it without molestation.........

Though bees which have stung and lost their sting always perish, they do not die immediately; and in the meantime they show little sign of suffering from the terrible injury. On August 25, a bee which had come several times to my honey was startled, flew to one of the windows, and had evidently lost her way. While I was putting her back she stung me, and lost her sting in doing so. I put her in through the postern, and for twenty minutes she remained on the landing stage; she then went into the hive, and after an hour returned to the honey and fed quietly, notwithstanding the terrible injury she had received. After this, however, I did not see her any more.

Like many other insects, bees are much affected by light. One evening, having to go down to the cellar, I lit a small covered lamp. A bee which was out came to it, and flying round and round like a moth, followed me the whole of the way there.

I often found that if bees which were brought to honey did not return at once, still they would do so a day or two afterwards. For instance, on July 11, 1874, a hot thundery day, and when the bees were much out of humor, I brought twelve bees to some honey; only one came back, and that one only once; but on the following day several returned.

My bees sometimes ceased work at times when I could not account for their doing so. October 19 was a beautiful, sunshiny, warm day. All the morning the bees were fully active. At 11:25 I brought one to the honeycomb, and she returned at the usual intervals for a couple of hours; but after that she came no more, nor were there any other bees at work. Yet the weather was lovely, and the hive is so placed as to catch the afternoon sun. ....

Far, indeed, from having been able to discover any evidence of affection among them, they appear to be thoroughly callous and indifferent to one another. As already mentioned, it was necessary for me occasionally to kill a bee; but I never found that the others took the slightest notice. Thus, on Oct. 11, I crushed a bee close to one which was feeding—in fact, so close that their wings touched; yet the survivor took no notice whatever of the death of her sister, but went on feeding with every appearance of composure and enjoyment, just as if nothing had happened. When the pressure was removed, she remained by the side of the corpse without the slightest appearance of apprehension, sorrow or recognition. She evidently did not feel the slightest emotion at her sister's death, nor did she show any alarm lest the same fate should befall her also. In a second case exactly the same occurred. Again, I have several times, while a bee has been feeding, held a second bee by the leg close to her; the prisoner, of course, struggled to escape, and buzzed as loudly as she could; yet the bee which was feeding took no notice whatever. So far, therefore, from being at all affectionate, I doubt whether bees are in the least fond of one another.........

Thus in nine experiments, out of the ninety-seven bees which came out first, no less than seventy-one were marked ones, though out of the whole number of bees in the hive there were only twelve marked for this purpose, and, indeed, even fewer in the earlier experiments. I ought, perhaps, to add that I generally fed the bees when I called them out.

THE SENSE OF HEARING.

August 29.—The result of my experiments on the hearing of bees has surprised me very much. It is generally considered that to a certain extent the emotions of bees are expressed by the sounds they make, which seems to imply that they possess the power of hearing. I do not by any means intend to deny that this is the case. Nevertheless I never found them take any notice of any noise which I made, even when it was close to them. I tried one of my bees with a violin. I made all the noise I could, but to my surprise she took no notice. I could not even see a twitch of the antennæ. The next day I tried the same with another bee, but could not see the slightest sign that she was conscious of the noise. On August 31 I repeated the same experiment with another bee with the same result. On September 12 and 13 I tried several bees with a dog-whistle and a shrill pipe; but they took no notice whatever, nor did a set of tuning-forks which I tried on a subsequent day have any more effect. These tuning-forks extended over three octaves, beginning with *a* below the ledger line. I also tried with my voice, shouting, etc., close to the head of a bee; but, in spite of my utmost efforts, the bees took no notice. I repeated these experiments at night when the bees were quiet; but no noise that I could make seemed to disturb them in the least.

In this respect the results of my observations on bees entirely agreed with those on ants, and I will here, therefore, only refer to what has been said in a preceding chapter.

THE COLOR SENSE OF BEES.

The consideration of the causes which have led to the structure and coloring of flowers is one of the most fascinating parts of natural history. Most botanists are now agreed that insects, and especially bees, have played a very important part in the development of flowers. While in many plants, almost invariably with inconspicuous blossoms, the pollen is carried from flower to flower by the wind, in the case of almost all large and brightly colored flowers this is effected by the agency of insects. In such flowers the colors, scent, and honey serve to attract insects, while the size and form are arranged in such a manner that the insects fertilize them with pollen brought from another plant.

There could, therefore, be little doubt that bees possess a sense of color. Nevertheless I thought it would be desirable to prove this if possible by actual experiment, which had not yet been done. Accordingly on July 12 I brought a bee to some honey which I placed on blue paper, and about 3 feet off I placed a similar quantity of honey on orange paper. After she had returned twice I transposed the papers; but she returned to the honey on the blue paper. After she had made three more visits, always to the blue paper, I transposed them again, and she again followed the color, though the honey was left in the same place. The following day I was not able to watch her; but on the 14th. at 7.29 a. m., she returned to the honey on the blue paper; she left at 7:31 and returned at 7:44: she again left at 7:51 and returned at 7:56.

I then again transposed the papers. At 8:5 she returned to the old place, and was just going to alight; but observing the change of colors, without a moment's hesitation darted off to the blue. No one who saw her at that moment could have entertained the slightest doubt about her perceiving the difference between the two colors.

The book is a very interesting one and we can supply it at the publishers' price, postpaid.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Bee-keeping in Maine.—Mr. E. P. Churchill writes thus to the *Home Farm*, concerning his fall and winter management of bees:

This season has been rather a poor one, on the whole, for bees, until a few weeks ago, when the honey was coming in much faster than at any other time and all looked bright; but a few cold days shut them up for a time; and more than the cold, we have now had a very heavy rain for a number of days, which will wash out and dilute much of the nectar that was so plenty in the goldenrod, and what few other fall flowers there are. But if the month opens clear and warm for a few days we are in hopes of an opportunity for a little more stores for wintering. But be the case as it may, let us attend to them at once, to know just how every colony is.

If they are on a full set of frames there should be about one-half taken out as soon as the brood is all hatched or out of the cells, and a division board set down on each side of what frames are left, and leaves filled in the open spaces. I find cedar shingles make the best division boards, by running the thin ends to lap each other so as to be one-fourth of an inch shorter than the hive,and deep enough to come up level with the tops of the frames; then clear them at each end and in the middle, and have them perfectly square and even; then tack one thickness of woolen cloth on the bottom and enough on the ends to cause them to fit snug when run down. I leave a few inches of cloth on the upper ends to roll down and tuck down into the ends of the boards. This is very handy, as it is always ready,keeps all snug, and also keeps the bees from getting outside. There need not be strips of cloth on the tops of the boards, as the cloth that covers the frames will answer. Now this is done there should be a chaff cushion on the cloth over the frames. A bran sack is a good and cheap article for this purpose and oat chaff the best, but if this chaff is not to be obtained, about half very dry leaves and sawdust mixed will do. The cushion should be four inches thick and filled out even at all corners, and packed down quite snug. If the rims and cap are all nailed together, I would take the cap off and put strips under at each end so as to shut outside of the rim; then there is a good chance to do all packing, etc., very handily.

One who has never used hives thus, will be surprised with one trial, for it is impossible to do the packing thoroughly with the rim and cap altogether. There should, of course, be no cracks, no holes for the least rain to get in, but there should be an inch air hole at each end and at the side of the rim near the top, bored slanting to turn water, and wire cloth tacked inside. These will take away the moisture that passes up through the packing, and keep the bees dry and warm. I did not lose one-half a pint of bees from my two heaviest colonies last winter packed in this manner.

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Food Adulterators. — The *Western Rural* contains the following very sensible article on food adulterations, and the way to punish the adulterators:

Our coming legislatures in the West will need give some further attention to the subject of adulterating food products. In Illinois and in some other States we have some pretty good statutes touching upon this matter, but, perhaps, they are all susceptible of improvement, and if not, we sincerely believe that all attempts to legislate in such cases, are a most excellent means of agitation and of arousing the people to action. We are among those whe believe that we should be vastly better off if we had less law making, but as we seem to be fated to have the infliction of a legislature every year, or every two years at least, we are in favor of their making all the noise possible on such important questions as that of putting a stop to the infamous work of the adulterators. The last legislature of Illinois gave us a very fair law against the sale of bogus butter as the genuine article, and for a time, there was an energetic and successful effort to enforce the law. Recently, however, there seems to have been a suspicious calm after the storm, and a corresponding suspicious flavor to a considerable of the butter that is found in the market. There are fairly grounded fears that the people have gone to sleep, and if we can get the legislature to discuss the matter again, and some such man as Evans,of Kane county, running about to raise a corruption fund to prevent legislation against food adulteration—as was the case when our last legislature sat—it will undoubtedly have the effect of once more attracting public attention.

We have about the least patience with food adulterations that we are called upon to manifest. The common swindler who assaults the pocketbook alone, will probably meet in time something like just punishment in the penitentiary; but the conscienceless scamp who robs us of both our money and our health, can never be punished according to his deserts; and the knowledge of this greatly irritates us. Our farmers are quietly engaged in raising products which support our population and add wealth to the nation. They are producing the flour which makes our bread, the honey and syrups which sweeten it, the sugar that makes our tea and coffee palatable, the butter and cheese and vinegar which we demand for daily consumption; and with the railroad to cut deeply into his profits, boards of trade to gamble with his products, until prices are forced down below what they ought to be, and with the tax collector demanding of him his own tax and the tax of a whole horde of tax shirkers besides, he stands poor enough show,without being compelled to compete with dishonest imitators of the products named. But without stringent legislation to prevent it, our stores are filled with adulterated flour, glucose for honey and the sweets of the cane, oleomargarine butter and cheese, and vile acids for cider vinegar. It costs next to nothing to manufacture these imitations, and if they are sold a few cents cheaper than the genuine articles are sold for, under the representation that they are first-class, which they often look to be and taste as if they were, it does not require much perception to see that an incalculable injury is done the honest producer. During the last half dozen years we believe that millions of dollars have been wrongfully taken from the pockets of our farmers through the audacious adulteration of farm products, and during that time we have no doubt that thousands have lost their lives by eating such imitations. The business, therefore, assumes a most villainous character, in whatever light it is viewed, and there is no class of our people, except those who are engaged in the disreputable business, that is not interested in having a stop put to it. The legislatures or Congress—and there is great need of national legislation upon this subject—cannot find a more hearty or universal support in legislation than they will find in any attempt to protect the producer and consumer from these greedy leeches. The *Rural*, in behalf of the producer, demands that the market shall be cleared of bogus food products which are not so marked as to convey a clear idea of their character. When so marked, they will not be very productive of harm, for the great majority of people will not purchase imitations if they know what they are.

CORRESPONDENCE

For the American Bee Journal.

How I Built My Bee Cellar.

G. M. DOOLITTLE.

During the winter of 1875-6, I ascertained that P. H. Elwood, Capt. J. E. Hetherington, and other extensive apiarists in Herkimer, Montgomery and Otsego counties, N. Y., wintered their bees quite successfully in what was called "mud huts."

These were made by digging a place, about four feet deep, in the ground, and providing a good drain therefor. Timbers were laid on the ground for the plates, upon which was placed the roof, which was about five feet high from the bottom, at the sides; and in the center, from 7 to 9, according to the width of the cave. The whole was then covered with earth to the depth of 2 to 3 feet. Over the earth was placed another roof to keep the dirt between the upper and lower roof dry. In the front end a portion was partitioned off, in which was placed a stove, the heat from which was made to permeate the bee cellar as desired, so as to maintain the temperature considered necessary for successful wintering.

After the chaff packing had been decided to be a success, I conceived the idea of wintering a part of my bees out on their summer stands, and a part in the cellar, thus working on the plan which is called "mixed farming" by those tilling the soil about here. Accordingly, in 1876, I prepared chaff hives for a part, and built a cheap temporary cellar for the rest. Instead of regulating the temperature with stoves, as was done by my bee friends of the East, I placed this temporary cellar in a hillside, believing that, if it went into the earth deep enough, an even temperature would be maintained without the aid of a stove, which proved to be a fact, for the temperature in this cellar did not change more than two degrees during all the winter.

After using it a few years I ascertained that a winter that was favorable for outdoor wintering was not as favorable for cellar wintering, and *vice versa*, thus proving that the plan of mixed wintering was a good one.

In the spring of 1879, out of ninety left on their summer stands, only fifteen came through; while fifty-three out of sixty, wintered in this cellar, came out in excellent condition. The following spring, after a very mild winter, all those out of doors came out strong, while the bee-cellar gave a loss of 10 per cent. However, the percentage of loss for the term of six years was far greater out of doors than in the cellar; hence this fall I have put up a permanent bee-cellar in place of the temporary one, and shall hereafter winter at least half of my bees in it.

Near my apiary is a small knoll, and into this I dug thirty-two feet, by nine feet wide. A drain was then dug around the outside, which was eighteen inches deep at the front, and six inches at the back. This drain was filled up level with the ground, or floor of the cellar, with small stone. From the lowest point of this drain I dug a ditch one hundred feet long, in which was placed two tiers of three and one-half inch tiles, one above the other, and so arranged as to serve the place of ventilation and drain combined, if any water should accumulate in the drain around the cellar. These tiles were covered to the depth of about three feet, so as to warm the air as it came to the bee-cellar. Upon the drain around the cellar, a good wall was built of stone, laid up with mortar, which is five feet eight inches high and gives me a cellar twenty-four feet long and six and one-half feet wide inside. Upon the top of the wall I placed plates 4x6 inches square, bedding them in mortar, which raised my walls to six feet high. Upon these plates, rafters were placed close together, so as to hold a great weight, and then covered with inch boards. A ventilator was placed in the opposite end, giving about two-thirds the capacity of the other, when the whole was covered to the depth of three and one-half feet with dry earth; over this was placed an outer roof, which extends six feet farther out than the wall on either side, and a good incline was given, to conduct all the water off.

The front end of the cellar is three and one-half feet lower than the surface of the ground about it, while the back end is about ten feet. I intended to grout the bottom with gravel and mortar, but the ground was so hard and dry that I have postponed it, for the present at least. At the end next the bee yard, I placed three well-built door frames, which were two feet apart from center to center. To these were spiked plank at the sides and on top, and covered with earth (with a slope wall standing out toward the bee-yard, so as to have as much earth here as elsewhere), over which the outer roof is allowed to come, so as to keep all dry. A door is hung on each door frame, which gives three doors and two dead air spaces, of two feet each, before the cellar is reached. The total cost of this cellar is a few cents over $75.

The hives are to be set around the outside of the cellar, one on top of the other, with chaff, or fine straw used as packing, the same as if they were to be left out of doors. As an experiment I shall leave one row of hives with the entrance the same as they are when on the summer stand; another row will have the full entrance, a third be raised on half-inch blocks, and the fourth upon inch blocks.

The cellar will hold eighty hives and leave plenty of room for an aisle to the back end, and 120 if filled full. One-fourth of my colonies of bees were placed in this bee-cellar on Nov. 3d, and to-morrow I shall put in one-fourth more. In one week I shall place in another fourth, and on the first of December the remainder, which are to be placed therein, and see which winters the best. Although the thermometer marks 40° inside, those already in are so still that scarcely a sound from them can be heard, but I find those raised on the inch blocks are aroused quicker by the light of the lamp when taken in.

About one-half of my number will be left on the summer stands, thoroughly packed in chaff, as heretofore, for I think such a course gives the best results, taking a number of years together.

If anyone could tell just what the winter would be beforehand, I would place my bees in the cellar for a cold winter, and leave them out during a mild one; but as no one can do this, I adopt the above, considering it the best, all things considered.

Borodino, N. Y., Nov. 10, 1882.

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For the American Bee Journal.

Wintering Bees in Chaff.

E. B. SOUTHWICK.

I have noticed some articles on wintering bees in chaff from some of our most consistent bee-keepers, and I think they are good, very good. I agree with them in what is necessary for successfully wintering our bees: that is, the bees should be young, healthy, and plenty of them; they should be kept dry and comfortable the entire season; they should have just food enough to keep them, and that easy of access at all time. If we can do this we may defy long, cold winters and all their consequences.

We have different ways of producing the same effect. Mr. Heddon's way is very good, and I think it will succeed; but I think it is more work, and not so handy, as Mr. Poppleton's; I suppose it is as good; as anyone could fix up such a hive as he uses.

Mr. Poppleton's way is so near like mine, that I will say nothing about it, only where it differs from mine. He says he has used his seven years, I have used mine about the same time, and think I have not lost a colony that was good in the fall, that did not die of starvation.

My way of packing and unpacking is as follows: My hive, inside, is 13 in. wide, 12 in. deep, and as long as I wish to have it. There is a space on each side of 4 inches to pack with chaff or leave as a dead air space,—and experiments have convinced me that the dead air space is as good without the chaff as with it. The back end board is loose and fastened in its place by a clasp across the end of the hive; it can be moved backward or forward to increase or diminish the size of the hive, at pleasure; the frame is made to stand on the bottom and not hang in the hive; it has a division in the centre and a slot that runs nearly from the top to the bottom; this slot answers instead of the holes that Mr. Poppleton makes in his combs, and the sticks that Mr. Heddon places across the top of his frames—that is, they all allow the bees to move comfortably from one part of the hive to another.

The frames run crosswise of the hive and the bees go in at the side instead of the ends of the frames; this I think better for several reasons. I will mention one: We find in all good colonies when the honey season closes, a quantity of brood in the centre of the hive, and as this brood hatches out, the bees bring the honey fartherest from the centre to fill up the combs; in my hives they generally empty the front and back combs entirely, so that, when I pack up, I can remove them, but in long frames, and where they go in at ends of short ones, they will remove the honey from the ends of the frames to the centre, so that we cannot remove the frames without removing the honey they need for winter, and consequently have a quantity of unoccupied room at the ends of the frames, which I very much dislike in packing.

This is my plan for fixing them up for winter. I wait three or four weeks after the bees have stopped gathering honey, and then I commence by taking out all the combs and putting in front a cushion, 2½ inches thick; this closes all the outlets for the bees, except one, 2 inches by ⅜ inches, through which the bees can pass under the cushions to the frames. I then select from three to five combs (according to the size of the colony) well filled with honey, and put them in front next to the cushion, and if there are more of such, I brush off the bees and put them away for other colonies or for spring use. I then put in those partly filled, the heaviest first, until all are in that have any honey in, then put in the end board and cover up the hive. I let them remain two or three weeks longer, then open the hive; and if the weather has been warm, I will find that the bees have carried most of the honey from back combs to those partly filled near the center. I then remove all the combs except five to eight in front, put in a cushion like the front one, behind these, and put in the end board, put cloth over the frame, put on the surplus honey case or upper story, and in this place a thick cushion, tuck it down all round, put on the top and it is done. The cushion should not reach to the top into an inch or more.

Now for the unpacking. As we cannot tell what the weather will be in the spring, we cannot set any day to commence, but when I see the oak leaves begin to grow, I take off the front cushion, and when the corn begins to grow rapidly, I take off the back cushions, but I generally leave on the top one until I want the room for the sections.

Allow me to give an opinion or two of my own. I know that such are worthless without proof, but somebody else may prove them. Feeding to produce breeding I think is entirely wrong; for breeding out of season, in my opinion, uses up more bees than it produces, and those reared late in the season are not worth as much in the spring as those that reared them would have been, had they not reared them. Early breeding amounts to the same, and both are productive of spring dwindling.

The convention at Chicago was a good one, just such as I like to attend, where I can exchange thoughts and ideas, which are always useful. Some one there said Mr. Heddon had changed. Well, really! When you show me a man that never changes, I will show you a god or a fool. There is nothing more admirable in a man than for him to as publicly admit that he is wrong, if convinced, as he previously advocated it. I think Mr. Heddon belongs to that society, the first tenet of which is, "Do right because it is right, and not for love, fear or policy." Such being the case, we shall always expect an honest opinion from him whether it agrees with his previous assertions or not.

Mendon, Mich.

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For the American Bee Journal.

The Syrian or Holy Land Bees.

REV. M. MAHIN, D. D.

It has been well said that the new races of bees are on trial; and, the only way to try them and ascertain their merits and demerits, is to place them side by side with the Italians, give them precisely the same treatment, and note the results. I have had one of them, the Syrian, on trial for more than a year past, and it will take me another year, at least, to decide whether I will supplant my Italians with them or not. I have never seen a Cyprian bee, and I have not much curiosity to try them, owing to their bad reputation for stinging qualities; but I have 22 colonies of Syrian or Holy Land bees, and I wish to report the results of my trial of them, so far. The most of those I had last summer were half-bloods, the queens having mated with Italian drones. In the latter part of the summer I had colonies that were pure.

They have more than sustained their reputation for prolificness; I have never before seen anything like it. I have not fully decided whether their prolificness may not be an objection to them. It is, unless precaution is taken to give them very large hives, or to remove combs of brood frequently and give empty combs or frames to make room for the queen to lay. Unless this is done, the surplus apartment is sure to be filled with brood in the midst of the honey harvest.

Taking the season through, I found the Syrians ahead of the Italians in the amount of honey gathered, with the exception of one or two extra Italian colonies, which equaled, but did not excel the Syrians. I found the half-blood Syrians to be wonderfully productive. Their comb building and honey gathering were marvelous during the time of the greatest yield.

What about their temper? Last fall I found them no more inclined to sting than the Italians. Last spring, while the weather was cool and little or no honey was being gathered, they were very cross, and it was exceedingly difficult to do anything with them; but when the flowers began to yield honey they were as gentle as could be desired; and this fall, while preparing them for winter, in which process I handled every comb in every hive, I found them quite as manageable as my Italians. In fact I got more stings from the Italians than from the Syrians. I am of opinion that they learn gentleness from careful handling, more readily than either blacks or Italians.

I cannot express any very positive opinion in regard to their wintering qualities. I will probably know more on that subject in four or five months from now; but my observation is very different from Mr. Doolittle's. He represents the Syrians as being more restless than Italians; on the contrary, the most remarkable characteristic of mine last winter was their unusual quietness.

In the fall, after the flowers were all gone, we had many days of warm sunshine; and while the Italians were out in full force every day, very few Syrians were seen about the entrances of the hives, except once in several days when they would take a good fly. And what was true of them in the fall, was true during all of the warm weather last winter. While the Italians could fly the whole of every warm day, the Syrians would only fly for an hour or two, once in several days; no matter how warm the weather might be. I have not noticed much, if any, difference between the two races, in this particular, this fall; for we have had no warm weather when they could not find something to work on. They were carrying pollen on Nov. 11, and seemed to be loaded with honey also.

It may be that, in a locality in which there is very little honey to be gathered after basswood, the Syrians may not be desirable; but up to the present time I am inclined to give them the preference over all others.

Huntington, Ind., Nov. 14, 1882.

* * *

For the American Bee Journal.

Bees for Business—A Report.

S. A. SHUCK.

Enormous reports from single colonies have been given from all parts of the country, and great claims are being made for the various races of bees, especially the Cyprians and Syrians. The reports given were from entire apiaries and a few select or single colonies; and, in most cases, where large yields are reported from a few select colonies, the average for the entire apiary was only ordinary, and, in some instances, the average was small.

Mr. Carroll, of Texas, reports 1,000 pounds from one colony and its increase, and 800 lbs. from a single colony, yet this 1,800 lbs. is nearly one-third of the entire product of 36 colonies.

Mr. Heddon and Mr. Doolittle both claim to have superior strains of bees, yet they both complain, more or less, of the frequent occurrence of inferior queens. Mr. Doolittle reports having destroyed fifty or sixty queens, a year ago, on account of their inferiority.

I wish to submit a report of my little apiary for the past season, and allow the readers of the Bee Journal to judge as to whether, or not, I am entitled to the claim of having a superior strain of bees.

I wish, first, to submit the following table of 30 colonies containing bees on June 1, 1882:

STATISTICAL TABLE.

Number of Colony.	Age of Queen.	No. of Frames occupied, June 1, 1882.	No. Frames of brood and bees given during the season.	No. Frames brood and bees taken away.	Comb Honey, lbs.	Extracted Honey, lbs.	Total product of each hive.
1	1	9	..	4	110	32	142
2	2	8	..	2	22	152	*a*174
3	3	7	..	3	21	130	151
4	2	7	..	5	...	196	196
5	1	*b*3	..	..	...	....	....
6	3	8	..	3	...	132	132
7	3	8	..	5	...	228	228
8	1	10	..	4	10	188	199
9	1	7	..	11	23	117	140
10	1	3	..	9	24	101	125
11	2	8	..	4	...	160	*c*160
12	1	3	..	..	108	19	127
13	1	5	..	2	25	125	150
14	1	1½	2	..	24	75	99
15	1	1½	2	..	100	16	116
16	1	8	..	2	24	109	*d*133
17	..	3	2	8	6	121	*e*127
18	..	1	½	..	...	34	*f*34
19	1	1½	6	1	35	5	*g*40
20	1	4	2	2	40	147	*h*187
21	1	4	..	..	44	134	178
22	1	9	..	13	12	153	*i*165
23	2	9	..	5	...	180	*j*180
24	..	12	..	11	38	146	*k*184
25	1	2	1	..	61	16	77
26	1	4	2	..	...	106	106
27	3	4	..	..	24	136	160
28	1	12	..	2	159	32	191
29	..	1½	3	..	5	38	*l*43
30	1	2	4	29	80	109	....
Totals.		166			944	3109	4053

References.—*a*, cast one swarm; *b*, sold June 7; *c*, daughter of imported queen; *d*, cast two swarms; *e*, young queen, laying; *f*, virgin queen; *g*, cast swarm, Aug. 9th; *h*, hybrid; *i*, hybrid; *j*, daughter of imported queen; *k*, imported queen; *l*, virgin queen, June 1st; hybrid.

The above-named 30 colonies were all I had left of 50 colonies last fall. Their pitiable condition on June 1, as shown in the table, was due to the extreme wet and cold in March, April and May.

On May 27 I do not think there was a pound of honey in my apiary. The last feeding was done on May 28. The weather, through June and the first half of July, was extremely wet and cool for the time of year. From June 1 to Oct. 1 rain fell on 35 different days.

We have 53 colonies now, with ample provision for winter, and the total amount of honey taken is 4,700 lbs.; 1,097 lbs. of it is comb.

Reckoning nine frames to the hive (the size I use), and allowing for the nuclei that was sold June 7, I had, on June 1, the bees for 18 full colonies. This gives 261 lbs to the colony, or a little over 28½ lbs. to the frame. Some may object to reckoning in this way, on account of the extra queens; but I know of no other way to come at it fairly, and I think, too, that the disadvantage of having the bees in so many hives more than offsets the advantage of the extra queens.

Our bees are a strain of Italians, procured in August, 1878, of Samuel Replogle, Hagarstown, Ind. I have bred them for stripes, industry, hardiness, prolificness, docility and size.

Judging from what I have read in the journals, my bees will not compare in prolificness and color with the Cyprians or Syrians, and some strains of Italian will surpass them in these respects, but for industry, hardiness, docility and size, I do not think I could get better bees anywhere.

As for comb building, my bees, like other Italians, build an excess of drone comb, but for comb honey I see no difference in the whiteness of the comb of that which they build, and that built by black or hybrid bees. In order to satisfy the readers of the Bee Journal, as well as myself, I will forward a sample of my comb honey to the editor, and he may decide for us all in this respect. The greater part of our comb honey was taken off in September, of which the sample is a specimen.

Bryant, Ill.

[The sample of comb honey was received in excellent condition—not a drop of leakage—and presents a very nice appearance. The cappings are exceedingly white, having more of the appearance of that done by black rather than Italian bees. The honey is light, but not the lightest; one of the combs is not fastened to the sides or bottom of the section, as well as we may desire, but on the whole it would grade No. 1 as to marketability. —Ed.]

For the American Bee Journal.

Development of "The Coming Bee."

E. L. BRIGGS.

The public bee fraternity are always interested in anything that looks like the improvement of the race of honey gatherers in America, or elsewhere. So I wish to report progress; and offer another prize for the best Italian queen out of eight; to be sent to me at any time before the 1st of July, 1883; to be not over 18 months old; home-bred or imported.

I hereby offer $25 for the best queen in eight, to be sent to me, by as many different breeders, on or before the 1st of July, A. D. 1883; in addition to the usual price for each queen sent as a contestant for the prize; subject to the following conditions: She must be better than either my Wilson Queen, No. 4; or my Lake Queen, No. 3; or my Henderson Queen, No. 6; in one, or more, of the five following particulars, viz.:

1. She must be larger in size and produce larger workers and drones than either of the above prize queens.
2. She and her offspring, workers, drones, and queens, must be as bright, or brighter yellow than the above.
3. She, and her worker offspring, must be as gentle, or more so, to handle; clinging to the combs when lifted out, with the same or greater tenacity.
4. Her worker progeny must manifest a greater industry in gathering honey, and filling surplus boxes, than either of the above.
5. She must be the most prolific as a breeder, keeping her colony strongest in numbers.

I reserve to myself the right: 1. To accept the breeder who offers to become a contestant, or reject his offer, at my own option. 2. To keep any one of the queens forwarded, by paying the catalogue price for the same, or one of my young prize queens, in exchange, as the sender may elect, or, of returning her to the sender, if she does not come up to the standard of those I already have. 3. The sender must pay the expressage to this place; and in all cases, when she is returned, both ways. On the first Thursday in next September the prize to be awarded by a committee of three or five breeders to be named by Thos. G. Newman, editor of the American Bee-Journal. At which time I will here, and now, invite a convention of bee-keepers, and others, to assemble and witness the award, and to discuss the interests of the cause generally; for a couple of days, or more.

I make this offer, not in the way of a banter, but in good faith. For I believe that every now and then there will appear a very superior queen, which the producer would perhaps ship off, at the ordinary price, and her superiority would be lost in mingling with ordinary stock. But by a careful selection he not only insures himself the selling price, which he charges, but he stands a chance of getting $25, in addition. And I make it further, because I am determined, if money, time, patience, and careful selection will do it, to breed the honey-bee up to the highest possible state of perfection. And I am confident that it is best for the whole bee-keeping fraternity that there should be "one best apiary" where stock is bred for perfection; and where it can be procured in its highest purity at any time.

I flatter myself that among the fifty or more tested young queens, now heading as many colonies in my apiary, bred from my three prize mothers of last year, I could select several which would take the prize I offer. And, doubtless, there are other breeders who can do the same. Out of our one hundred other colonies, there are not five, I think, which contain bees with less than three yellow bands. They have all been queened by imported stock, or the best of home-bred mothers. And as to their honey-making qualities, they have filled nearly every receptacle which I have given them to fill, this summer.

Come, fellow workmen, let us correspond, interchange, compare notes, and work together for the "Coming Bee." To this end, under like circumstances, I would like to compete for a similar prize in any part of the country. Let some one try his hand with other races, if he thinks they will prove better producers; whether it be with brown, black, two-banded, or one-banded, Cyprian, Holy-Land, Austrian or Egyptian; there is room enough for all.

But I, with many others, am content with the beautiful, golden hued, gentle, industrious, and prolific Italians. When coming in from the fields of clover and linden, ladened with golden drops of nectar, as they drop upon the alighting-board, like a shower of golden drops, I know that it is not the poetry of the matter alone which delights me,but the golden coins as well, which their produce brings.

Wilton Junction, Iowa, Oct. 21, 1882.

For the American Bee Journal.

Bee Notes from Iowa.

WM. PAXTON.

The busy bee is at rest and the season is at hand to compare notes and prepare for another season's work.

My small report went in with southeast Dakota, with which my location and the flora are nearest allied, although I live on the east bank of the Sioux.

I commenced the spring with four colonies, one strong and three little more than nuclei. I took 400 lbs. of extracted honey and increased to nine, by division; I will not say in good condition for winter, because I succeeded in getting a live queen so late that I expect to find unfertile queens, next spring. Probably Good's food for queen cages would have saved the shipper two valuable queens, and me much valuable time. I fed my bees up to July.

Some years ago while residing near Manchester, Delaware Co., Iowa, I made a trip west, leaving home about Aug. 20th. At Fort Dodge I found bees just building up, and on returning, in September, that the first swarm had issued Aug. 28 and they were still swarming and at work in the supers. This was so unusual to me that I inquired whence came the nectar, and I was answered goldenrod; but my informant was unable to point out the plant with which at that time I was not familiar.

My bees had closed the season's work and killed the drones. I never looked for surplus from fall bloom. I wrote to a friend, suggesting the moving a part of his bees and mine for another harvest, but he did not look upon the proposal with favor. Yet I could not rid my mind of the practicability of extending the season by change of location, and especially where a short remove, as in this State, will carry you from the richest fields of clover and forests of linden to the best fall pasturage.

Had business matters favored it was my plan to spend the coming winter in the South—buy, transfer and handle bees past the best honey flow, and ship North by carload, not caring to reach this point before July.

Will some readers of the BEE JOURNAL, located where bees are comparatively idle consumers, at a season not later than the last of June, correspond with me on the subject.

Controlling fertilization is among the important unsettled problems. D. A. Jones on his isolated island can test the pure races and crosses, beyond any guess work, but the high latitude and chilly lake breeze make the season short, and the surrounding water must make the loss of queens heavy. In my opinion it is only on a prairie, comparatively new, without tree, stub, or stump, to harbor wild bees, that queens can be bred to the best advantage, and fertilization absolutely controlled, without confinement. It is is only a matter of moving your nuclei with the desired drones to a safe distance from tame bees.

The dollar queen has come in for a good share of abuse during the season. Even the lazy drone has found its advocate, while scarcely a voice is raised for the cheap queen. It may be true that the drone gives heat to the young brood, but to me it seems very like feeding a dozen idle loafers to warm a room by animal heat. Other drones may build comb, I believe mine do not.

That some breeders of dollar queens are honorable men, breeding and sending out just such queens as they would use at home, you are all forced to admit; the dollar queen, then, is only such, because untested; breeders think they can afford them for that price. I want to know that the strain is of the best, with good chances for pure mating, and for obvious reasons I will do my own testing, and believe I can do so cheaper than the breeder can.

I am not a dealer in bee-keepers' supplies; never raised a queen, but for my own use or to give away, and could not give time for the necessary correspondence; but to him who has had the courage to advertise, and by fair dealing has worked up a trade, I would say, if he has a choice strain he wishes to keep pure, some one could undertake to breed and test for him, at wholesale only, for one dollar, because to do so he would only have to take a queen for shipping from a full colony and replace her by one from nuclei, with full assurance that twenty-one days would show her brood pure as the one she replaced.

Mr. Heddon has placed before us his dark, long, red-clover bees, with such candor and force, that I am almost a convert to the principle: "Handsome is, that handsome does."

What untrained eye would look for beauty in the Merino, his coarse, ugly horn, wrinkled, surly face, and gaunt, ill-shaped body, several sizes too small for his dirty coat? Yet his owner could see beauty in "Gold Drop," when every ounce of blood in his veins was worth its weight in gold, and he could see additional beauty in each fold of his loose, dirty, wool-covered skin—yet, the intrinsic value being equal, I must confess a preference for the compact Down, or the square, stately Cotswold, with snow-white fleece in graceful ringlets.

The interesting test of Prof. Cook and others, shows the tongue of the Italian longer than the black, the Cyprian still longer, and the Syrian equal to either, in the yellow; then by breeding in the good points, and out the vicious, may we not hope to find all the good qualities, that, by careful selection, Mr. Heddon has found in his mixture of yellow and black?

Mr. Jones says the best in his yard is a cross of Italian with Syrian; his chances for observation are large and his opinion worthy of consideration, and I, for one, fondly hope to find the advent of the new races result in improvement worthy of the bold enterprise of the man who at great cost has given them to us.

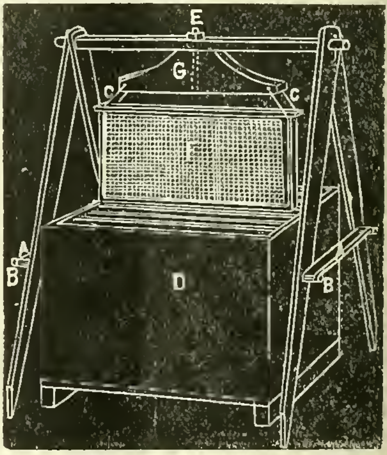
Beloit, Iowa, Nov. 7, 1882.

For the American Bee Journal.

Revolving Frame Holder.

N. H. BARNHILL.

I send you a rough sketch of a contrivance I use, and find of great assistance while examining frames, and introducing queens. It consists of a frame somewhat similar to a clothes horse, with a revolving head, to the end of which two wires are attached, which can be expanded to suit any frame. The revolving head enables you to examine both sides, also to clip the queen's wings, without disturbing her, by the use of a pair of spring scissors, as used in knives, etc. I could not get on without it, unless I had some other assistance.



A A are strips of cloth, tacked to pins to prevent spreading, and are handy for tools to hang on.

B B, pins of wood to hold the cloth.

C C are wires to hold the frames, by slipping them over the end bars.

D, the hive.

E, the bolt to hold the wooden revolving head to the upper bar of the frame holder.

F, the frame in position.

G, revolving head, containing wires to hold the frames.

Evelyn, Ga., Oct. 14, 1882.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Nov. 29-30, Western Michigan, at Grand, Rapids.
Wm. M. S. Dodge, Sec.
6-7, Michigan State, at Kalamazoo.
T. F. Bingham, Sec., Abronia, Mich.

1883.
Jan. 16.—Eastern N. Y., at Albany, N. Y.
E. Quakenbush, Sec., Barnerville, N. Y.
11, Nebraska State, at Wahoo, Neb.
Geo. M. Hawley, Sec.
16-18, Northeastern, at Syracuse, N. Y.
G. W. House, Fayetteville, N. Y.
19, 20.—Mahoning Valley, at Berlin Centre, O.
L. Carson, Pres.
Feb. 3.—Northern Ohio, at Norwalk, O.
April 5.—Utah, at Salt Lake City.
E. Stevenson, Sec.
—, —Texas State Convention, at McKinney.
Dr. W. R. Howard, Sec.
Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

◆

For the American Bee Journal.

West Texas Bee-Keepers' Association.

A number of bee-keepers from different parts of the State met at Bower's Hall, Luling, Texas, on Nov. 1, 1882, for the purpose of permanently organizing the West Texas Bee-Keepers' Association. The President called the meeting to order and stated the object of the meeting; after which a constitution and by-laws were adopted. Then followed a number of very interesting discussions.

A resolution was passed constituting the President and Secretary a committee to communicate with the various Fair Associations for the purpose of getting a department of agriculture.

The Secretary was also instructed to correspond with the honey dealers of Europe, that we may get a direct European market for our surplus products.

The meeting then adjourned to meet in San Antonio, about the 20th of Oct., 1883, or during the West Texas Fair.

The following gentlemen were elected as officers for the coming year: President, J. S. Tadlock; Vice President, Capt. W. L. Foster; Secretary, Thos. Balcomb; Treasurer, Rev. S. C. Orchard. Thos. Balcomb, *Sec.*

Luling, Texas, Nov. 8, 1882.

◆

☞ The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning Co., O., in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th. L. Carson, *Pres.*

Read before the Union, Ky., Convention.

Queen Rearing and Honey Producing.

J. H. READ.

The apiarist who produces honey only, need not spend the whole of his time in the business, hence he may add some other business to that of honey producing with profit. In this respect the business of honey producing differs from the business of queen rearing. Of course my remarks are to have a general application, for I believe there are many locations where it will not pay to attempt to produce honey at a profit; am I right? yet, I am convinced that there are many localities where honey can be produced at a profit, and the business safely made a specialty.

In breeding queens as a business of profit there are many drawbacks. The breeder must sell queens from his colonies early in the spring, to satisfy his customers, and he sometimes sustains loss—even the loss of a colony in filling these early orders. His queens are sometimes lost or die in transit, and he has sometimes to return money to dissatisfied customers. All these things have to be endured by the queen breeder. It is gratifying, however, to have on hand nice queens for sale, and to have orders for them from all over the country. It is not only pleasant to receive the cash for them, but it is a pleasure to send them away to please customers, and to introduce the finest stock everywhere. I have been breeding queens for years, and yet, had I to commence anew, I think I would be a honey-producer.

Orleans, Ind.

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☞ The Nebraska State Bee-Keepers' Association, will hold its annual session in Wahoo, Saunders county, Neb., commencing Thursday, Jan. 11th, 1883. Arrangements have been made with the railroads to secure 1¼ fare for the round trip. The Saunders county Bee-Keepers' Association will furnish entertainment free to all visiting apiarists. Bee-keepers from neighboring States will be welcomed.

T. L. VonDorn, *Pres.*
Geo. M. Hawley, *Sec.*

◆

☞ The Western Michigan Bee-Keepers' Association will meet at Supervisors' Hall, in the city of Grand Rapids, on Wednesday and Thursday, Nov. 29th and 30th, 1882. The co-operation of all bee-keepers of this section is desired.

Wm. M. S. Dodge, *Sec.*

◆

☞ The 17th annual convention of the Michigan State Bee-Keepers' Association will be held in Kalamazoo, Dec. 6 and 7, 1882. All interested are cordially invited to participate in the discussions—which will embrace the live issues of the Apiculture of to-day. Thomas G. Newman, A. I. Root, D. A. Jones, Prof. A. J. Cook, and many other distinguished apiculturists are expected to be present. Low rates of board at hotels have been secured.

T. F. Bingham, *Sec.*, Abronia, Mich.

SELECTIONS FROM OUR LETTER BOX

A Home Market.—I commenced with 10 colonies last spring; increased to 26 by natural swarming. I obtained 1,100 lbs. of comb honey, in 2 lb. sections, and sold it at home, from 15 to 20 cts. per pound. My bees are in good condition to go into winter quarters. I winter them in the cellar. I think this is a good location for bees, as there are many honey-producing plants; although there are not many bee-keepers in the country. I am taking seven papers, and if I were compelled to do with only one, that one would be the American Bee Journal.

D. M. Dierdorff.
Waterloo, Iowa, Nov. 11, 1882.

That 1,000 Pounds of Honey from One Colony.—Last year you put me down as an Ohio man in your report, and I think I see another little mistake this year. Dr. J. E. Lay tells me he thinks the J. C. Carroll of Dallas Co., Texas, who reported to the National Bee-Keepers' Convention that he had a colony of Cyprian bees that had gathered 1,000 lbs. of honey during the season, was myself. I made the statement that I had obtained 800 lbs. of surplus, 115 lbs. now in the hive and about 50 lbs. wasted by evaporation, as the loss was from two to five pounds during the horsemint flow. (I did not keep a daily memoranda of the colony, only now and then weighing, to see if any loss would occur during night, which was as above stated.) And I said I thought they had consumed not less than fifty pounds in brood rearing, making over 1,000 lbs. brought in by this colony. My bees are gathering honey from cotton, similar to the horsemint in June. Drones by thousands are flying and I have a nice lot of queen cells ready to hatch. The thermometer stood at 90° F. at noon yesterday, and at 10 o'clock p. m., yesterday, it stood at 76° F. The bees were roaring at night, like summer time. No frost, and not even a cold spell yet. Send on your bees, Mr. Harrington, before the blizzards set in; you can have part of my range. The horsemint is up, a fine stand, three to six inches high. Look out for another big crop. B. F. Carroll.

Dresden, Navarro Co., Texas.

[We gave the name just as it came to us in the report of the National Convention, but it is evident that it meant you. The mistake last year, of giving Ohio as your address, was our own, which we regret we did not discover in time to correct it then.—Ed.]

Cold Wave.—The weather was warm here last week. The cold wave which struck Chicago last Sunday, reached here before daylight this morning. It is not cold, however, and it is quite pleasant. Henry Alley.

Wenham, Mass., Nov. 14, 1882.

And Still Sweet Clover is Blooming.—Please find enclosed some sweet clover that is in full bloom yet; it came up on one side of our house this spring and the bees were found working on it on Nov. 11, and now the ground is covered with snow 3 inches deep, so you see it blossoms with us until winter. Bees have done very well here for such a bad season. I bought one colony, last July, of E. T. Flanagan and have increased to three now, in good condition for winter. I bought 4 colonies of blacks this fall and sent to W. Z. Hutchinson for a queen and introduced her into one of the colonies of blacks. Success to the Weekly Bee Journal. I shall give you my plan for wintering bees after a while, and see what you think of it. I never have lost one colony in wintering yet. G. L. Pray.

Petoskey, Mich.

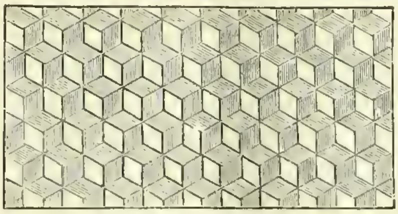
[The fragrant little blossom is received and gives another proof of its hardihood.—Ed.]

Bee-keeping in Canada.—I often wonder what is called good work for a colony of bees to do in a certain time. One of my colonies of brown bees gathered last season 34 lbs. in 3 days, and threw a large swarm the day before I commenced the test. The hive has 3,000 cubic inches. It will not pay to double up the bees in the spring of a good season, though this is not the common advice and rule. Last year I got 75 lbs. of honey from one colony, with only 100 bees on May 1. The same queen has done well two seasons since. I believe many good queens lose their heads when they are not always to blame; if she is not producing drones, give her a chance. Pack the hive inside, not outside, leaving only three frames at most, and put a few sheets of paper on top of the frames to keep the heat in and drive it down. The golden willow is the only thing in Canada that gives honey before the dandelions. Bees work on it here until quite dark in good weather; it fairly rains honey and can be seen easily with the naked eye. If you wish to plant it, and have a creek or permanent lane on your farm, with an ax cut off branches 4 to 6 feet long, any size, in the spring, and drive them where wanted; if put along a creek they make a good shade for cattle, and in three years they will support a wire fence. When my bees are getting honey I like to know how much, what from, and what kind of day. As to Bokhara clover not growing, it will grow anywhere, if there is moisture to sprout it and keep it alive until it gets hold of the ground, the same as other clover and timothy. I hoed the seed in, in rows, between mangolds, and it did well; I harrowed it in with oats, on June 1, with last stroke of harrow; it was two feet high before I cut my oats. It has given the barn a fine smell, and the bees have haunted it all the fall, in vain, for honey. I find onions are good to use in doubling bees; I have tried them and without loss. Honey is an excellent medicine for the eyes, it is unequalled for inflammation. As to whether bee-keeping pays, I will let the bees speak for themselves. Last season there were only four colonies to make profits in the good year. They gathered 126 lbs. on an average, having come through two years without loss. The willow and apple trees were killed while in bloom, and we had to kill the young bees. The expenditure in two years for bees was $80, and the receipts $480. Chas. Mitchell.

Molesworth, Ont.

Comb Foundation.—What is comb foundation, and how is it made? Please describe it in the Bee Journal. John Krainik.

[We have repeatedly described comb foundation and its manufacture; and will now content ourself with saying that comb foundation consists of sheets of beeswax, formed by dipping wooden plates into melted wax, and, upon being rolled through a machine, these sheets have indentations made on both sides, that form the foundation of cells, which the bees readily accept and work out into comb.



COMB FOUNDATION.

It would be tedious to review all the various styles of foundation presented to bee-keepers since it was first introduced in America. We have had foundation with triangular-shaped cells, with flat-bottomed cells, with high side-walls, and with no walls at all; with linen, cotton, wood, paper, tin-foil and woven-wire for a base; while, latterly, we have had foundation with fine wires imbedded in it, and frames of foundation with wires pressed therein. Experience is demonstrating, however, that a medium heavy sheet—say, four-and-a-half to five feet per pound, with a thin base or septum, and heavy prominent side-walls or lines, is the most desirable for economy in the use of wax, and rapidity in comb-building by the bees.—Ed.]

My Little Report.—I had 17 Italian colonies in the fall of 1881. I wintered them in American hives, modified, but using the American frame. They wintered in the cellar. I had 17 in the spring of 1882; sold one, and obtained 1,600 lbs. of extracted and 200 lbs. of comb honey, in 1 and 2 lb. sections; increased to 23 colonies, which are now in good condition for wintering. In justice to my report, I should say that owing to the severe drouth last season, 5 of my colonies were mere nuclei, which, with queen, were wintered on 4 frames, and they not covered with bees. Some of my neighbors have obtained as high an average as 150 lbs. of honey to the colony, in spring, with a larger increase than I have had. Bee culture will receive quite a boom in this locality another year, on account of the large yield this year. M. Leidy.

Carthage, Mo., Nov. 13, 1882.

Packing My Bees.—In a few days I shall pack my bees in boxes, each in a single box, with 5 inches of sawdust all around, like Mr. Heddon does. I have 35 colonies of Italians. Three days ago I noticed that my best colony (which had given 200 lbs. of comb honey) was very uneasy, and carrying out dead bees; in the night they were still uneasy, but yesterday they were more peaceful. To-day they are all alarmed again, so I opened the hive and found that the middle comb (drone comb) which I placed there 3 weeks ago, having sealed honey for winter use, was nearly emptied of honey, and to my astonishment was full of eggs, from 12 to 20 eggs in each cell, on both sides, and two queen cells were started, the bees acting like they would when swarming. I took out the comb and gave them another with sealed spring honey. Please explain the cause of this. G. Damkohler.

Clarence, Mo., Nov. 3, 1882.

[The colony had become queenless, and while in a state of commotion, consequent upon the bees learning their condition, it was also attacked by robber bees. If you had watched closely you would have seen that the bees went away filled with honey, which is always a very suspicious circumstance. The commotion at night also shows that the colony was invaded by robbers. Or the colony might have been invaded by robbers and in the commotion caused, the queen may have been killed. The 12 to 20 eggs in a cell were the result of fertile workers, an unnatural development consequent upon the loss of the queen. Had you removed the colony to the cellar for a few days, or contracted the entrance so as to admit only one bee at a time, or thrown some grass loosely over the entrance you would have aided the robbed colony, and prevented the second attack. To give them another queen, or unite some weak colony with it, is now the best thing to do, as it is very late to repair the loss.—Ed.]

Small Wire Worms in Pollen.—I would like to enquire if anyone has been troubled with small wire worms, that are hatched in the pollen, while it is packed in cells around the brood nest. It is great injury to the brood. They are from ¼ to ½ inch in length, and work along the centre of the comb and attack the larvæ before it is fully capped over, and pushes it out of the cells for the bees to carry out of the hive. They work for months and do not increase in strength. I have had 2 colonies this season invaded by these worms, and one of my neighbors also had colonies invaded by them. I took the bees from one of these hives and gave them new combs, to start them anew. Being late in the season, both I and my neighbor put a sulphur match to the other hives, and thus we got rid of them for the present. My theory is this: In breeding time I noticed a quantity of flies at the entrance of the hive, and saw the bees pounce on them and drive them away, thus showing them to be enemies. What were those flies after, if not to deposit eggs in the hive, where the heat of the bees will hatch them out? They are very different from the moth, which I can find, if on the combs; their heads are of a different color, and their bodies are whiter. If any one has noticed these flies or worms I hope to hear from them in the BEE JOURNAL.

ROBERT CORBET.

Manhattan, Kansas, Nov. 3, 1882.

Moving Bees, etc.—I enclose some plants for name, and please state where they grow extensively, for they are very scarce here. No. 1 is 2 feet in height, and is very thick with bloom and branches. It commences to bloom in July and is blooming still. No. 2 grows from 5 to 6 feet high and blossoms same as No. 1. No. 3 grows from 4 to 6 feet high and blooms from September till frost. I want to ship my bees 150 miles. Shall I ship them by freight or express—now or next spring? Will it injure the brood to ship them in the spring?

SYLVESTER MARSHALL.

Prattsfork, O., Sept. 28, 1882.

[No. 1 belongs to the aster family, and abounds in low, rich bottom lands all through the Northern States. It is now also spreading in the South.

No. 2 is the *melilotus alba* or sweet clover, and will grow anywhere on any soil, and in any climate.

No. 3 is goldenrod and is also found on the low lands and river bottoms. They are all good honey producers.

The best time for shipping bees any considerable distance, is in April, or quite early in May, before the combs are too heavy with brood; but with proper care in preparing them and ordinary usage in handling, they may be shipped at any time with comparative safety except in very cold weather.

The first work is to go through the hives and extract all the uncapped honey, as the least daubing will prove fatal to the bees; then procure a block one inch square, and as long as the hive is wide, in this cut notches and tack in the bottom of the hive, in which to place the frames to keep them steady; now select the new combs and those heavy with brood or sealed honey, secure them well in the frames with strip-binders, and place in the hive; tack the ends of the frames firmly to the rabbets on which they rest; dip the blanket in clean water, lightly wring, fold about six thicknesses, and lay on the front ends of the frames. If the hive has no portico, leave off the cover, and use wire cloth instead, nailing on top of that, three one-inch strips, two inches wide—one across the center, the others across each end, to insure ventilation when piled on each other. Now tack wire cloth over the entrance, and your bees are ready for shipment.

If the hive has a portico, prepare in the same manner as above, except to bore a one-and-a-half inch hole in each side of the brood chamber, and also in the cover, which will be used in place of the wire cloth over the frames; the holes to be covered inside and outside wire cloth to admit of ventilation. Leave the entrance open full size, but cover the entire portico securely with wire cloth, leaving free access to it from the interior of the hive; care must be taken, however, to bore a one-and-a-half inch hole under the roof-board of the portico, and left open, to allow free ingress to the interior of the hive, as the entrance beneath may become choked up, and the cluster of bees, with the queen, die of starvation through inability to get at the honey in the hive. Hives made with porticoes are much better for shipping bees, for it allows them to drag out the dead, cleanse the hive, and, to a great extent, prevent dysentery. Prepared in this manner, full colonies may be shipped at all seasons, from May 1st to Aug. 10th, with perfect success. They should be sent by freight; the expressage will cost too much, and they will be no more carefully handled.—ED.]

Quick Work.—I get the quickest return from an advertisement in the AMERICAN BEE JOURNAL of any paper I ever advertised in. The BEE JOURNAL is mailed at the office on Tuesday: it reaches me on Friday, and on Saturday, the day after the BEE JOURNAL comes to hand, I frequently get calls for my circular; these calls come from Pennsylvania and New York States.

HENRY ALLEY.

Wenham, Mass., Nov. 14, 1882.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., November 20, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The supply of extracted honey is fully up to the demand. My quotations are: 6½c. for dark and 8½c. for light, delivered here.

BEESWAX—It is quite scarce. I am paying 27c. for good yellow wax, on arrival; dark and off colors, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The market for extracted honey is very satisfactory. We have received within the last three weeks more than 200 bbls., principally from Louisiana, Mississippi and Florida, and the demand exceeds our experience and expectations. We have sold more than ever at this time of the year. Florida furnishes a honey which equals our Northern clover, and excels all the Southern honey I have had so far. There is some call for comb honey, but we have had no arrivals yet of a choice article. Comb honey brings 16@20c. on arrival; extracted, 7@10c. BEESWAX—Firm at 20@25c. per lb.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand increases with the cool weather, but not sufficiently fast to keep pace with receipts, which now accumulate, as it is time to get the surplus into market. Prices remain unchanged with perhaps a tendency downward, owing to many consignors desiring to realize quickly.

We quote: white comb, in small sections, 18@20c. Fine, well-filled, 1 lb. sections bring the outside price. Dark comb honey, little demand, 15@16c. Light honey, in larger boxes, 12@16c. Extracted—white clover, 9½@10c.; dark, 8@9c., in barrels and half-barrels. Kegs will bring but a small advance, if any, above half-barrels.

BEESWAX—Very scarce. Choice Yellow, 30c.; dark to fair, 20@24c.

R. A. BURNETT, 165 South Water St.

SAN FRANCISCO.

HONEY—Stocks are abundant of medium and dark grades, and the demand for such is light. A sale of 150 cases extra C comb was made Wednesday at 14c.

White comb, 18@20c; dark to good, 12@15c; extracted, choice to extra white, 9@10c.; dark and candied, 7½@8½c.

BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Plentiful and slow. We quote, in lots, comb at 15@17c; strained at 6@7c.; extracted at 9@10c.

BEESWAX—Prime bright quotable at 26@27c.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—There has been no change in honey the past week. No. 1 white, in 1 ℔ sections, continues in good demand at 21@22c. per pound, No. 1 in 2 lb. sections, is also in good request at 19@20c. Second grade, less active, at 1@2 cents ℘ lb. less. Extracted, in all shapes, was dull and very little sale. Some Louisiana honey, rather dark, in barrels, was sold at 9c.

BEESWAX—Prime quality, 25@28c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is a fair demand for prime lots of honey, and choice is held firmly, with occasional sales of fancy a trifle higher than we quote.

We quote: White clover, fancy, small boxes, 19@22c; white clover, fair to good, 16@18c.; buckwheat, 13@16c.; extracted clover, 10@13c.; extracted buckwheat, 9@10c.

BEESWAX—There is only a moderate movement of wax, but prices held about steady at 29@30c. for Western, and 30@31c. for Southern.

Western, pure, 29@30c; Southern, pure, 30@31c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Sells very readily in 1 lb. sections at 22@25c. for best white, and 20@22c. for 1½ to 2 lb. Boxes containing ½ pound, 30c. per pound. Extracted is selling very slowly at 12@14c.

BEESWAX—25@26c.

CROCKER & BLAKE, 57 Chatham Street.

THE AMERICAN BEE JOURNAL

ADVERTISING RATES.

20c. per agate line of space, each insertion.

A line of Agate type will contain about **eight words;** fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance.

Special Notices, 50 cents per line.

DISCOUNTS will be given on advertisements published WEEKLY as follows, if the whole is paid in advance:

For **4** weeks		**10**	per cent. discount.	
" **8**	"	**20**	"	"
" **13**	" (3 months)	**30**	"	"
" **26**	" (6 months)	**40**	"	"
" **39**	" (9 months)	**50**	"	"
" **52**	" (1 year)	**60**	"	"

Discount, for **1** year, in the MONTHLY alone, **25** per cent.,—**6** months, **10** per cent.,—**3** months, **5** per cent.—if wholly paid in advance.

Discount, for **1** year, in the SEMI-MONTHLY alone, **40** per cent., — **6** months, **20** per cent.— **3** months, **10** per cent.—if wholly paid in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement is inserted.

THOMAS G. NEWMAN,

925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ A few of our subscribers are in arrears for the present year—having requested us to continue, and they would pay soon. Will all such please take this as a request to send on the two dollars with a renewal for next year, if possible.

☞ The Amerian Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)	$1 00
" 100 colonies (220 pages)	1 50
" 200 colonies (420 pages)	2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal,	$2 00	
and Gleanings in Bee-Culture (A.I.Root)	3 00	2 75
Bee-Keepers' Magazine (A.J.King)	3 00	2 60
Bee-Keepers' Exch'nge (Houk & Peet)	3 00	2 80
Bee-Keepers' Guide (A.G.Hill)	2 50	2 35
Kansas Bee-Keeper	2 60	2 40
The 6 above-named papers	6 00	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25	3 00
Bees and Honey, (T. G. Newman) "	2 75	2 50
Binder for Weekly, 1881	2 85	2 75
Binder for Weekly for 1882	2 75	2 50

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

☞ Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

Kendall's Spavin Cure is used from the Atlantic to the Pacific coast.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly is now permanently established, and will be continued as heretofore.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ The BEE JOURNAL is mailed at the Chicago Postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

Every lady should send 25 cents to Strawbridge & Clothier, Philadelphia, and receive their *Fashion Quarterly* for six months. 1,000 illustrations and four pages new music each issue.

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

New Premiums for 1883.

As the season for reading has now arrived, we hope that each of our subscribers will endeavor to send at least one new subscriber for the Weekly BEE JOURNAL for 1883 and thus not only help on the cause of progressive bee-culture, but assist in sustaining the only Weekly bee paper in the world.

Providence has smiled on the bee-keepers during the past season, and as a general thing they are abundantly able to procure a good assortment of bee-literature.

In order to encourage every one who keeps bees, be they few or many colonies, to thoroughly read the many very interesting books on bee-culture, now published, we have determined to make liberal offers, which will be available until January 1, 1883, as follows:

To any one sending us $8 for any books they may select from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for one year.

To any one purchasing $4 worth of books, selected from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for six months or the Monthly for one year.

Any one sending us a club of two subscribers for 1883, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

Subscription Credits.—After sending subscriptions to this office, we would respectfully ask every one to look at the label on the wrapper of the next two papers, and there they will find the credit indicated thus: Those who have paid for the first six months of next year will find "June 83" after their names. Those who have paid for the whole year will find "Dec. 83" on their papers. The credit runs to the *end* of the month indicated. If the mark is "Dec. 82," it means that the subscription is paid until the end of the present year. Please remember that the credit given on this label is a sufficient notification of subscriptions due and receipt for payments made. If not so indicated within two weeks after sending money to us, you may be sure something is wrong, and should write to us about it. It will save annoyance and trouble if our subrcribers will give this matter due attention.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

☞ New subscribers for the Weekly BEE JOURNAL for 1883, can obtain all the rest of the numbers for this year by sending $2 to this office.

◆

☞ The New York Weekly *Tribune* says in regard to the Noyes Dictionary Holder, manufactured by L. W. Noyes, 99 West Monroe St., Chicago: "We know of but one satisfactory Holder; that, however, is so good that a second is not needed." Mr. Noyes sends to all applicants a handsome illustrated circular. Prices reduced.

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

"BEE-KEEPERS' HANDY BOOK."

22 Years Experience in Rearing Queen Bees.

A book written and published by

HENRY ALLEY, WENHAM, MASS.

A NEW SYSTEM OF QUEEN REARING.

It will teach you how to prepare your bees for cell building; what eggs to select, and when to select them; how to remove drones from a swarm of bees; how to have the cells hatched without having them destroyed; how to keep the queens after they have hatched; how to introduce virgin queens to nuclei colonies; the best way to introduce laying queens to full colonies; how to test queens without keeping them in the hive three weeks after they are fertilized; how to know a good hardy queen from an inferior one the moment she leaves the cell; how to judge of a prolific queen before she has laid 100 eggs; how to select a queen to use for one to breed from; how to raise and preserve drones late in the season; what kind of a queen to raise drones from as well as the kind of drones to use; how and when to transfer bees from box to frame hives, and, in fact, many things that have never appeared in print, that are invaluable to any bee-keeper, whether he keeps a few or many colonies. Send for circular. 47w2

LOOK HERE!

If you want cheap bees and hives to suit, good Cyprian, Albino or Italian Queens, Comb Foundation, all kinds, Section Boxes, and everything a live apiarist needs, send for prices.

Full Colonies and Nuclei a Specialty

with good young Queens. Give me a call, friends, and I will try and please you. (Box 819)

E. T. FLANAGAN, Rose Hill Apiary.
5w1y Belleville, St. Clair County, Ill.

THE BRITISH BEE JOURNAL

AND BEE-KEEPER'S ADVISER.

The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited and published by

C. N. ABBOTT, Bee-Master,

School of Apiculture, Fairlawn, Southall, London.

☞ We send the Weekly AMERICAN BEE JOURNAL and the *British Bee Journal*, both for $3.50 per annum.

☞ For sale at the BEE JOURNAL Office. ☜

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NEW YORK

We continue to act as solicitors for patents, caveats, trade-marks, copyrights, etc., for the United States, and to obtain patents in Canada, England, France, Germany, and all other countries. **Thirty-six years'** practice. No charge for examination of models or drawings. Advice by mail free.

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Address, Munn & Co., publishers of Scientific American, 261 Broadway, New York.

Handbook about patents mailed free.

LIVE BEE-KEEPERS WANTED,

to introduce the new lime cushion, the only protection yet discovered that will carry the bees safely through winter and spring without fail. Send $50, for right to retail this cushion in your county, or send $5 for one apiary right to patentee.

F. DELLA TORRE,
Reistertown, Baltimore co., Md.
Remit by registered letter or P. O. order.
Patented April 25, 1882. No. 254,932. 45w13t

Rev. A. SALISBURY

Camargo, Douglas county, Ill.

20 Years Experience in Queen Rearing.

Our Motto is:

—"Low Prices, Quick Returns; Customers Never Defrauded."

Italian Queens.....$1; Tested....$2
Cyprian Queens....$1; Tested....$2
Palestine Queens..$1; Tested... $2

Extra Queens, for swarming season, ready, if we are timely notified.

One-frame Nucleus, either Italian, Cyprian or Palestine, $4; Colony of bees, either Italian, Cyprian or Palestine, 8 frames, $8. Safe arrival guaranteed.

20c. paid for bright wax. **Money Orders on Tuscola, Ill.** 1wly.

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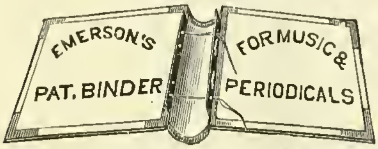

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IS THE NEATEST AND CHEAPEST.

Any one can use them. Directions in each Binder.

For Monthly Bee Journal..............**50c.**
For Weekly Bee Journal...............**75c.**

Address, **THOMAS G. NEWMAN,**
925 West Madison Street, **Chicago, Ill.**

DARWINISM with its theory of the evolution of man from the animals and his extinction at death overthrown. A personal God and an eternal existence for man proven by *science*. Infidelity and Materialism dethroned. The *Wave theory* of Sound, taught in colleges and high schools for 2,000 years, proven to be a stupendous scientific fallacy. Revolutionary in Science and the most remarkable book of this or any other age. Royal Octavo, 528 double column pages, handsomely bound and containing very superior likenesses of the great scientists of the age. Darwin, Huxley, Hemholtz, Mayer, Tyndall and Haeckel. $2, by mail, postpaid. Local and Travelling Agents Wanted. Circulars, with table of contents and "opinions of the press," and of Clergymen, Professors in Colleges, etc., free to all.

SCHELL & CO., 52 Broadway, N. Y,

65 *ENGRAVINGS.*

The Horse

BY B. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

THOMAS G. NEWMAN,
925 West Madison Street, CHICAGO, ILL.

Given's Foundation Press.

The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.

1wly **D. S. GIVEN & C.,** Hoopeston, Ill.

HONEY

I buy and sell Honey for Cash only. As I do no Commission business, I will not accept shipments without previous correspondence.

ALFRED H. NEWMAN,

WHOLESALE AND RETAIL DEALER IN

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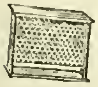

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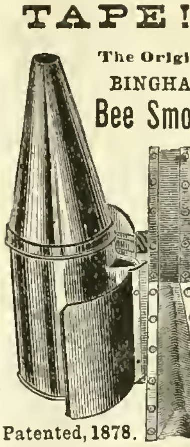

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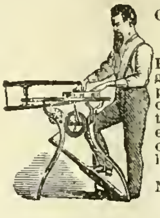

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.................................. 753
Another New Book on Bees............ 753
Throw Away the Old Honey Boxes........ 753
Glucose Factory Failures........ 754
The Chicago Bee Convention............... 754
Cost of Getting Those Statistics........... 755
International Exhibition at Hamburg..... 755
Very Crooked..... 756
Honey and Beeswax Market................. 763

Among Our Exchanges—

Bees in China...................................... 756
Reversible 756
Effects of Conventions and Honey Shows 756
Whence Cometh Many Diseases?.......... 756
A $20 Biblical Reward........................ 756

Correspondence—

Our Railroad Apiary Car and Track........ 757
How I Make Nuclei and Queen Cells....... 757
Boil It Down.. 758
Different Kinds of Bee-Keepers............ 758
Duties of Bee-Keepers in the Spring...... 759
New Plan for Introducing Queens, etc.... 759

Convention Notes—

Local Convention Directory................ 760
Convention Notices............................ 760
Maine Bee-Keepers' Association.......... 760
Iowa Central Convention..................... 761
How to Cure Foul Brood..................... 761

Selections from Our Letter Box—

Report for 1882................................. 762
A Natural Bee Hive............................ 762
4,000 Pounds of Honey from 19 Colonies.. 762
Ready For Winter............................... 762
Care of Empty Combs......................... 762
My Season's Work.............................. 762
Sensible Bees.................................... 762
Wintering Bees.................................. 762
Report for the Past Season.................. 763
My Bee Report 763
Causes of Foul Brood........... 763
Questions 763
A Humbug or Swindler, Which............ 763

Another New Bee Book.

We have received the prospectus of a new book by Henry Alley, Wenham, Mass., entitled "Twenty-two Years Experience in Rearing Queen Bees." Mr. Alley says, " this work is intended to teach the best, easiest, most scientific and practical method for rearing queens." The price will be $1.00. The author, in his prospectus, remarks as follows :

For twenty-two years I have made the business of rearing queen-bees my sole occupation, and during that time have probably reared more queens than any other man in the world. I have experimented largely in queen-rearing, when, about four years ago, I discovered a new method of building queen cells, that does not take one-half the time, labor, trouble or expense required by the old process. By this method I rear just as many or few queens as I put eggs into a hive, and in the exact locality in which I desire them built. The cells are all large, and so evenly spaced apart, that each one can be cut out without injury to its neighbor cell. The queens produced are as large, hardy, long-lived and prolific, as any reared under the swarming impulse. The cells are all built in full colonies, which are queenless only four days, consequently always have a large proportion of young bees. The time of hatching of a given lot of cells can be determined within an hour of each other, as they are never from one to three days apart in hatching out, as by the old process. By my method at least as much honey can be produced by use of the extractor, as though the colony was not engaged in cell building. My method is entirely new, and has never been published ; only three persons besides myself have any knowledge of it, and they (all old bee-keepers) assure me that I have reduced the matter of queen-breeding to a perfect science. I propose to publish my method, in book form, and at the same time give many of the valuable ideas gained by me during my long experience in this branch of apiculture, and that have never before been made public. As this work will require an outlay of from $150 to $200 for engravings, etc., to illustrate my method, I propose to charge a fair price for it.

We can fill orders for this work as soon as published, which will be duly announced in the BEE JOURNAL.

Throw Away the Old Honey Boxes.—A bee-keeper came to Chicago last week to sell his honey. In order to save a lot of six-pound boxes he had on hand, he used them, and consequently depreciated his honey 5 cents per pound. He said, most emphatically, as he was leaving the BEE JOURNAL office : "It would have paid me much better to have burned up the old boxes and bought new sections." It certainly would have paid him better, and been much more satisfactory to all concerned to have done so. Let all who may have any old large boxes on hand bear this transaction in mind.

☞ We have received a copy of Mr. G. M. Doolittle's Club List of Papers for 1883. It consists of 12 pages besides the cover, and is very neatly printed. Those who want to subscribe for several publications should send for it. They will find much in it to interest them. His address is Borodino, N. Y.

☞ We intend to be present at the Michigan State Convention, at Kalamazoo, on Dec. 6, 1882, and hope there will be a good attendance.

☞ Many bee-keepers have done well during the past season, and should be feeling quite happy. Now it will be in order to prepare for the next season's work by procuring your hives and sections in proper time for use.

Glucose Factory Failures.

In these factories more than a million dollars are locked up. As the price of corn is high and the production of glucose is in excess of the demand there is a proposition on foot to consolidate the factories, and thus prevent competition, so as to make the product pay. A meeting was called at Davenport, Iowa, and the proposition for consolidation was well considered, for there was a session of three or four hours, and at last it was referred to the Board of Directors with power to act.

Of course there are several glucose manufactories which are failures, so greatly encumbered that they are not worth the amounts loaned on them—and these will not be accepted in the consolidation, although the creditors are making frantic efforts for admission into the scheme.

The Davenport *Democrat*, in giving an account of a recent meeting of the stockholders of the Davenport Glucose Works, states that the business has reached a peculiar crisis. Because the glucose works at Buffalo, New York, proved profitable, a multitude of glucose companies were organized in the West and hundreds of thousands of capital were put into buildings and machinery, and now the proprietors of these factories, with only three or four exceptions, are dissatisfied with their experiments, which have proven losing investments. There are thirteen in number in the West, besides the works in Peoria and Leavenworth, which are owned by the Hamlins, of Buffalo, N. Y. The Davenport *Democrat* gives the following statement of the present condition of the several companies named:

Davenport works—capacity, 3,000 to 3,500 bushels of corn per day, shut down two weeks ago, that the present proposition might be considered: will resume operations in thirty days, whether the consolidation is affected or not.

The Des Moines, Iowa, and Sagetown, Illinois, works have proved failures, sinking all the capital invested.

Marshalltown, Iowa, works, after having used up $250,000 capital, are being enlarged from 1,500 to 3,000 bushel capacity for profitable working! The stockholders have never received a cent of dividend.

Rockford, Ill., capacity 1,500 bushels per day—heavily encumbered and idle.

Geneva, Ill., capacity 800 bushels per day. Idle—failure.

Freeport, Ill, capacity 3,000 bushels per day. Idle, with 7,000 barrels of syrup on hand. Resumption of operations improbable.

Iowa City, Iowa, capacity 1,500 bushels per day. Shut down because of dull trade. Profitless so far.

St. Louis, Mo., capacity 2,000 bushels per day—idle.

St. Joseph, Mo., capacity 1,000 bushels per day—working occasionally as there may be demand.

Danville, Ill., capacity 3,000 bushels per day—shut down because of dull trade.

Tippecanoe, Ohio, closed for repairs. The only really successful works in the West, outside of those owned by the Hamlins, and the Davenport works.

Peoria, Ill., capacity 3,000 bushels per day—idle.

The factories of the Hamlins—two in Buffalo, one in Peoria, and one in Leavenworth, having an aggregate of 20,000 bushels per day—are in operation, but selling the product at a very unremunerative price.

The Firmerick works, in Buffalo, are refining works—for the purpose of making sugar out of corn starch for mixing with real sugars for table use, use 6,000 to 8,000 bushels of corn daily. The great works being built in Chicago, capacity 15,000 bushels daily, contemplate the same business.

There are big works near New York—owned by Duryea and Booth & Edgar—having an aggregate capacity of 10,000 bushels daily, in operation. Will not enter consolidation, but make combination with the consolidated companies.

The works at Kansas City, Mo., and Wheeling, W. Va., were built for refining by the dry process. They absorbed $100,000 each, and are dead failures.

Detroit works, capacity 3,000 bushels daily—are idle.

The above is the results of the rush of many men to get rich, even if they had to sell their manhood to do it. We are heartily glad that corn is too high in price to allow its conversion into such a fraud as glucose.

◆

The Chicago Bee Convention.

We have already remarked that we thought the late convention of bee-keepers in Chicago was the best we ever attended, and added that, the enthusiasm being so great, those in attendance wanted to meet at 8 o'clock in the morning, and held that session until about 1 o'clock in the afternoon. In the last *Juvenile Gleanings*, Mrs. L. Harrison likens conventions of bee-keepers to schools, and the presidents to schoolmasters, and adds:

I have always thought that bee-keepers ought to take their wives and children with them to the bee meetings, and have a good time as well as themselves; but I am really glad that you were not at the Northwestern, that was lately held at Chicago. Why, the master wanted to hold a session from eight in the morning until one in the afternoon, and not give us a bit of a recess; and he would not let us whisper a bit. I did, though, just once; I only asked his wife how many children she had, and down came his stick with a whack that made me jump. I wanted so much to ask her if she liked to make beeswax, but I didn't dare to after that. He called me horrid, too; I don't believe in whispering in school, and I would not have done it had he given a recess to do my talking in.

Mrs. Harrison then made the following suggestions about the managment of such meetings. She evidently looks to the rising generation for reform, and adds:

When you boys and girls have a convention, and have talked about black, brown and yellow bees for one hour, throw open the windows to let in fresh air, make on a fresh fire, stand up and sing a bee song, or the doxology, or have an old-fashioned recess, and play leap-frog, or anything you like; after recess you can keep still, listen, or talk at pleasure.

This is a thought well worthy of consideration. We often get weary, and know that a rest, a song, or a recess would be very agreeable and refreshing, and we will now promise that at the next convention we will have some songs ready to intersperse in the meetings, such as "The Bees Among the Clover," "Charlie, the Bees are Swarming," etc., and, if the president does not object, we will have a lively time. We really think he will be glad not only to permit it, but to help do the singing, for he is a musician, and, if we do not mistake, the leader of a quartette or church choir.

President Miller's son, 14 years of age, sends the following statistics to *Gleanings*, showing "some of the results of wintering reported by 50 bee-keepers at the Chicago convention:"

HOW WINTERED.	Number of colonies last fall.	Number lost in winter.	Per cent. lost in winter.	Number lost in spring.	Per cent. lost in spring.	Per cent. lost in winter and spring.
Chaff hive	136	1	.7	1	.7	1.5
Packed in hay	37	0	0	1	2.7	2.7
Bee-house	203	4	2.	5	2.5	4.5
Cellar	1671	26	1.6	52	3.1	4.7
Chaff packing	1186	52	4.4	14	1.2	5.6
Out unpacked	18	1	5.6	0	0	5.6
Chaff and cellar	76	1	1.3	5	6.6	7.9
In a cave	12	0	0	1	8.3	8.3
Total	3339	85	2.5	79	2.4	4.9

Mr. Root remarks that "the report shows well for chaff hives, but not quite so well for chaff packing as for cellar wintering." And President Miller says: "We had a good, solid, working convention at Chicago; more honey being represented than at Cincinnati."

Cost of Getting Those Statistics.

In reference to this very important subject we have received the following letter:

> I am much interested in the honey statistics of the country, so much so that I worked up this county at my own expense; the account of which has been published in the BEE JOURNAL and credited to J. S. Terrill, by mistake of the Secretary of the Convention, at Cincinnati, O. Now, I have a plan which I have been thinking about, that would cut down your $4,000 some, if it could be made to work. There are a great many bee-keepers in the country who are fourth-class postmasters (I happen to be one of the unlucky class), whose salary is made up of from 60 per cent. of the amount of stamps canceled; on the first $100 each quarter; 50 per cent. of the second $100, and so on. Now, the most of these postmasters cancel less than $100 each quarter, so you see they get 60 per cent. of all the stamps canceled. My idea is to get these bee-keeping postmasters interested in these statistics; let them work up their own counties, and donate the per cent. of cancelation at their office to the statistical fund; also, ask each bee-keeper to donate a few cents to carry on the work. What enterprising bee-keeper is there who would not give a few pennies to know the amount of bees and honey raised in the country. It cost me ten times that amount to get the statistics of one county, and yet I feel paid for the cost and trouble, and if each bee-keeper that I corresponded with had sent me a three cent stamp (which I think they would have done if I had asked it), it would have covered the whole expense.
>
> There might be counties where you could not find a P. M. to do the work; then let one man work two or more counties. This is a small job if you will use a copying pad, for with once writing you take 75 legible copies; these pass through the mails for one cent, thereby cutting down the postage two-thirds, and the letter writing to a mere shadow. I am confident that these plans will work with a trifling expense, and if you will authorize me, I will try one county at my own expense. I would prefer a county joining Lorain. Now, from these suggestions, perhaps some one can suggest something better. But don't let that $4,000 scare us out of the work which is necessary in the interests of the bee fraternity. O. J. TERRELL.
>
> North Ridgeville, O., Nov. 17, 1882.

There may be some postmasters who would be willing to aid the work of obtaining statistics in the way Mr. Terrell mentions,—but, we fear, they would be very few in number, not over one in a thousand!

We did not mention the amount necessary to defray the expense and postage, in order to "scare" any one "out of the work," but to have its magnitude fully understood.

We only calculated on one-cent postage each way, but there are 45,000 post offices in the United States. To get a circular to each one with a return postal card will cost over $1,000. Then there will be an average of say 3 bee-keepers to each post office; to get a circular and postal card to each of these will cost over $3,000 more; or over $4,000 in all. It is very generous in him to offer to get the statistics of another county; who else will volunteer to get the statistics of a county, if we will undertake to furnish blanks for each county, to be filled up and returned to us to tabulated? We *may* get this started yet.

Since writing the above we have received the following letter from Mr. Hackman, which will fully explain itself:

> DEAR EDITOR:—You are correct on the expenses regarding the statistics of bee-keepers, but why not get the statistics of live bee men: that is, of those who read bee periodicals? They could be easily reached by simply making a call through the different bee publications? It seems to be of very little use or consequence, as far as it regards the box-hive and log-gum bee men; their product will never affect the market much. Let us have the statistics of progressive and systematic bee men, and I, for one, would be much pleased. We have but 3 of such bee men in this locality. If there is a call made, according to my idea as stated above, I will do all I can to get information. We have a few box-hive men around here, but their goods are generally in such a condition that they will never affect the market much. H. S. HACKMAN.
>
> Peru, Ill., Nov. 17, 1882.

In order to make a table, showing the honey production of America, that will be of any value, it must include all the honey produced, no matter whether it be obtained by progressive bee-keepers or not. It is very kind of Mr. Hackman to promise to do all he can—but if it is not to be a thorough and complete statistical table, it will be better not to undertake it at all. It should be organized at the start so completely that it cannot fail to overcome every obstacle which can be thrown in the way. The funds must all be provided in advance, for there will be enough work in the legitimate performance of their duties to occupy the entire energies of the committee, without looking after such trifles as the money to pay postage and expenses, etc.

Until that is done we can do no more than to discuss the plans proposed, in the hope of finding one that will reduce the expenses to the minimum.

Last year we tried the plan suggested by Mr. Hackman, of calling for reports of the progressive bee-men who read bee-periodicals, and our experience is that but few will take the trouble to report, and such are always those who have been most successful, consequently the Tabulated Statistical Table we published last October was assailed by some who did not report, and, by perversion and malicious misrepresentation, attempted to make it look ridiculous; as may be seen in extracts from some of these impulsive correspondents, as quoted in the BEE JOURNAL for Dec. 14, 1881, and Jan. 11, 1882. Several other attacks were made upon us and that Table, which we deemed too malicious to answer.

International Exhibition at Hamburg.

Some months since we mentioned the fact that there would be an "International Exhibition of Animals connected with Agriculture," at Hamburg, Germany, from July 3 to 11, 1883. This Exhibition includes implements, machinery, literature, etc., connected with each department; the fifth being "Bees; appliances for the keeping and culture of bees, and products of the same." Now we desire to announce that we have a number of programmes, giving specific directions for exhibitors, etc., and will send these to any one applying for them, who may contemplate sending an exhibit.

We were requested by the Provisional Committee to take charge of the American exhibits in the fifth class, (see page 306), and Richard Gottel & Co., Export Commission Merchants, 202 Walnut St., Philadelphia, Pa., have consented to forward exhibits to Michaelis & Hoffmann, at Hamburg, who will take charge of exhibits and sell them, if requested, and return the proceeds to the owners of the articles exhibited, at a moderate percentage.

This Exhibition will be one of great magnitude. Much interest in it is already manifested throughout the world; it is, therefore, advisable that those who wish to exhibit should secure the proper space as early as possible. The Hamburg commission firm wishes to be informed of any one desiring to secure space, and will obtain it for exhibitors in America.

They will also supply all necessary information concerning the Exhibition and its management, together with circulars and other papers referring to it.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Bees in China.—Mr. O. W. Willits, writes a letter from Pekin, China, to the *Juvenile Gleanings*, concerning the only colony of bees he had seen during a residence of three years in China, and the bee pasturage he found there. He thus describes the bees and the place where he found them, etc.:

> I have hurried out to examine more closely the only hive of bees it has been my fortune to see in China during a residence of three summers. This is in a hollow tree in the rear of the pagoda of a large Buddhist temple. The bees are not so large as our common bees, nor do they seem as much inclined to sting, though some Chinamen were stung the other day by a few who had been disturbed in their work of building a new home. The entrance to this tree is just above the ground. The bees are so thick about it that I cannot determine where the hole begins, though it ends about fourteen inches above the earth. I should think there were bees enough for several ordinary hives; in places they are five or six layers deep. I wonder if they are going to swarm. They are of a general brownish hue, but have *three* broad bright-yellow bands. I wish I had more courage, and I would go up and get one. How I should like to get into that old tree!
>
> While I have been writing, my little girl, with two playmates, has been been wading in a lotus pond. I wonder if I can describe the lotus flower so that your boys and girls will get a correct idea of how it looks. It grows out of the water much like the water-lily, but doesn't stop growing so soon; for the stalk, which becomes half an inch or more in diameter, stretches up from three to five feet above the water. One solitary leaf forms at the top. The leaf, in front of me, and there are larger ones in the pond, measures eighteen inches in diameter. It is of coarse texture, almost round, and has some twenty or twenty-one strongly marked veins radiating from the center. It resembles a green umbrella which the wind has turned inside out.
>
> On a similar stalk, but not on one bearing a leaf, there forms the largest and most beautiful flower I ever saw. It reminds one much of the peony, though it has not so many petals, and is on a much grander scale. These before me are pink, though there are also red and white ones. Within these beautiful petals stands up the seed-pod. It is shaped somewhat like a cucumber cut crosswise. The seeds are arranged in a circular form, and set in like cartridges in a repeating rifle, which they also resemble in other respects. These seeds, when ripe, are eaten with a relish. The root, also, is a salable article of diet, much desired, and bringing a good price. A slice of it looks like a slice of raw potato after a boy has filled his pop-gun as many time as possible without breaking the partitions. It has a pleasant, sweetish taste, and is prepared for food in many ways. The Emperor has a lake of lotus-flowers. After not many days, hundreds of men will find employment in gathering the succulent roots.

* * *

Reversible.—The *Scientific American* in a late issue, mentions the following:

> An improved honey extractor has been patented, consisting of a series of comb holders resting on a plate or frame loosely mounted on a vertical shaft in a vessel, the comb holders having pivots or pintles projecting from the bottoms, on which pintles pinions are mounted, which engage with a cog wheel rigidly mounted on the shaft below the loosely mounted plate, this cog wheel being provided on its upper surface with a series of notches, and the plate or frame being provided on its under side with a pawl strip adapted to catch on the notches, so that the honey will be thrown from the combs by the centrifugal force when the shaft is rotated, and when the motion of the shaft is slackened the comb holders will be reversed. The comb holders can thus be reversed very rapidly and easily by simply retarding the motion of the cog wheel by holding back on the crank.

* * *

Effects of Conventions and Honey Shows.—The *American Agriculturist* for December is received, and under the heading of "Bee Notes for December," we find the following, on the beneficial effect of Conventions and Bee and Honey Shows, which the Bee Journal has persistently advocated for many years:

> A leading cause for the recent rapid progress in Apiculture, is to be found in our numerous Conventions. These County, District, State, Inter-state, and National meetings, to consider, and discuss important questions, are now numbered by hundreds, and are lending a powerful influence to develop practical apiculture. The most influential of all these societies is the North American Association. This gathers the "meat" from all the lesser associations and freely distributes it to the whole country. Reports were made at the recent Cincinnati meeting from nearly all the States of the honey yield for the past season. The records for the South and West were encouraging. The South especially has had a wonderful yield of the best honey. In the East, and north from Ohio, the yield has been unprecedentedly light. In Southern Ohio, and portions of New York and Canada, the report is of an entire failure. In California and the East the crop is poor. From these reports we gather three important facts. first, cold, no less than excessive drouth or wet, will dry up the nectar glands, and blast the bee-keeper's hopes. Secondly, the Gulf States, especially Texas, bid fair to rival California as honey producing regions. The winters are as safe, the honey season as long, and the seasons more sure. Thirdly, the South can furnish as fine honey as any section of the United States. Honey exhibited from Florida, Mississippi, and Texas, was greatly admired. From these reports, we also learn an important lesson: that to secure a certain harvest, bee-keepers must grow special honey plants. Then, if the white clover, or the basswood fail, we still have hope.
>
> If rightly managed, it is impossible to clog the market even with extracted honey. Pure honey in every salesroom and factory, put up in the best style, will sell in almost unlimited quantity. Overstocking the market need no longer be feared.

* * *

Whence Cometh Many Diseases?—The *Grange Bulletin* remarks as follows on the danger of adulteration:

> Remember that pure honey has no equal as a medical sweet and far exceeds that of ordinary or common sugar syrup (or glucose), which should at all times be used in preference to either of the two last named articles. Besides, let us ask, would it not be wise in us, as a people, to reflect and study from whence comes many of the ailments the human family seem to be heir to of late years, when we see so many cases of cancer that fasten upon the vitals of the human system.

* * *

A $20.00 Biblical Reward.—The publishers of *Rutledge's Monthly* offer twelve valuable rewards in their *Monthly* for December, among which is the following:

> We will give $20.00 in gold to the person telling us how many verses there are in the New Testament Scriptures (not the New Revision) by December 10th, 1882. Should two or more correct answers be received, the reward will be divided. The money will be forwarded to the winner December 15th, 1882. Persons trying for the reward must send 20 cents in silver (no postage stamps taken) with their answer, for which they will receive the Christmas *Monthly*, in which the name and address of the winner of the reward and the correct answer will be published. This may be worth $20.00 to you; cut it out. Address Rutledge Publishing Company, Easton, Penna.

* * *

Very Crooked.—The crookedest of crooked work, and yet that which has grace and elegance in every crook, may be seen in the Noyes Dictionary Holders and Noyes Handy Tables. In them the fact is clearly demonstrated that if the inventor has *not* made the crooked straight, he *has* made the straight crooked, and thereby increased its beauty and utility. People in search of holiday presents will appreciate his success. A fine illustrated circular may be had *free* by addressing L. W. Noyes, 99 W. Monroe-st., Chicago. The prices have been greatly reduced.

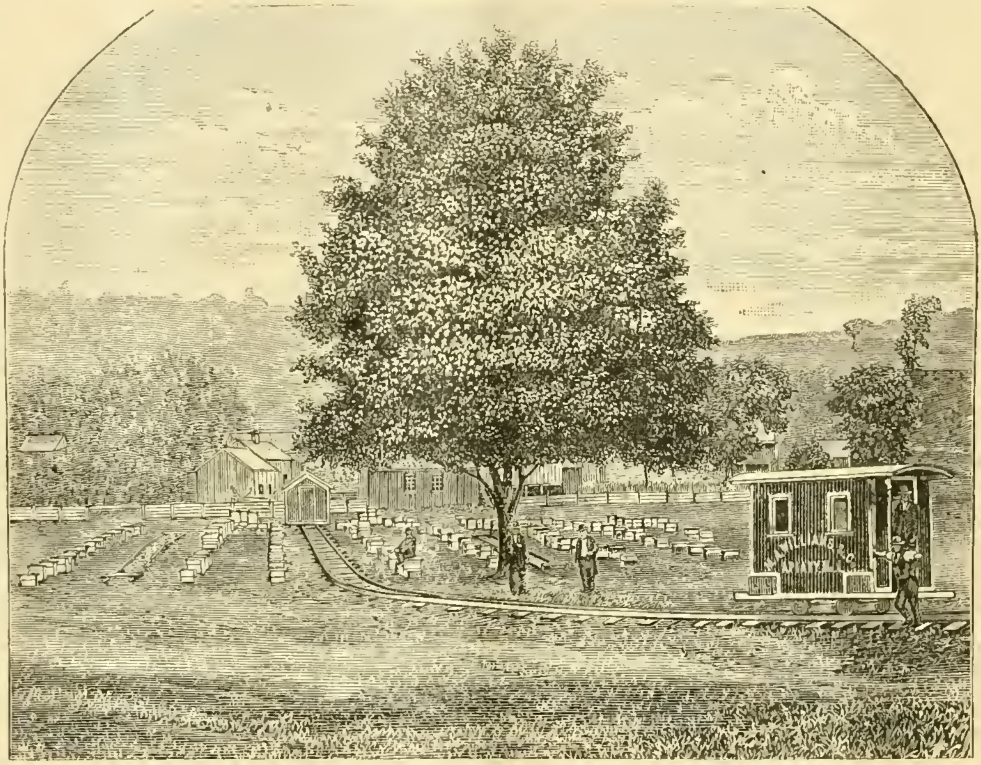
CORRESPONDENCE.

For the American Bee Journal.

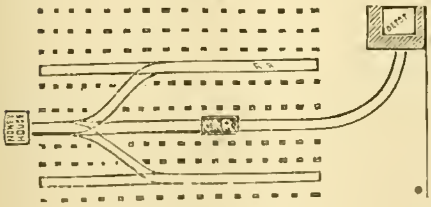
Our Railroad Apiary, Car and Track.

M. A. WILLIAMS.

DEAR EDITOR:—We enclose picture of our railroad apiary, showing our extracting car, etc. We have 140 colonies in this apiary and with the aid of our extracting car two men can take the honey from them in one day. At the end of the center track is our honey house, fitted up with tanks, where we empty the honey as fast as we get a load. You will see that each side of the car is fitted with drawers, one for full combs and the other for empty ones.



RAILROAD APIARY, EXTRACTING CAR AND TRACK.



TRACK AND SWITCHES.

The extracting car and track we have already described, as follows, in *Gleanings:* The car is 12 feet long by 6 feet wide, painted bright scarlet, and trimmed with white, and makes a very showy appearance; but the car is not for show, by any means. It has a double sash, one side being glass and the other wire cloth, so that we can have free ventilation through. Each side of the car is fitted up with two drawers that hold just ten Langstroth frames.

We start out with one drawer full of empty combs on each side. Pushing the drawer alongside of the hive, we take the full frames from the hive to the empty drawer and fill the hives right up with the combs from the other drawer. Then we are through with one colony, the time occupied being incredibly short. Then we are ready for No. 2, and the combs from No. 1, when extracted, go into the hive of No. 2. Of course, the honey is being extracted inside the car at the same time. The drawers are so arranged that the car is bee-tight when they are either open or shut.

Figure 2 shows our track and how we switch from one track to another. There is one movable length of track that easily moves from the main track to the switch, on either side. The sketch rather shortens the yard, as the distance from the maple tree to the honey house is greater than the breadth. The two rows on the left are chaff hives, and the rest of them are the Langstroth. The sketch shows how we are located as to the depot, railroad, etc.

Mr. Root makes the following remarks about the use of the car: "It will be noticed that our friends run their honey right to the station on this same car, so that their honey is shipped without the need of a team at all. Now, by having other apiaries along the line of the main railroad, 10 or even 100 miles away, where there is found unusual pasturage, the car, with all its appurtenances, may be quickly and easily transported, and then, with suitable switches, the honey can be taken with little bother and expense. It rather seems to me now as if this were a more promising field to develop than the floating apiary that made such a sensation a few years ago."

Berkshire, N. Y.

For the American Bee Journal.

How I Make Nuclei and Queen Cells.

G. M. DOOLITTLE.

When I was writing my series of articles on the "Production, Care, and Sale of Comb Honey," I was requested by several persons to write an article on making nuclei, and getting queen cells for the same. Many ways of making nuclei have been described, some of which are good; still after trying nearly all the plans described in the bee publications, I have settled on one which I prefer to all others.

Nearly all are aware that if we take a frame of brood, bees and honey, from a populous colony and put it in an empty hive without a queen, that nearly all the bees will return to their former home; but if we take the queen with them the majority of the bees will stay with her. This one point of so many bees returning to their old home, thereby causing the brood and queen-cell given to perish, is the great objection to most of the plans stated for making nuclei. As bees without a queen become attached to their queen-cells, to nearly the same extent they do to a queen, I reasoned that if a colony having queen-cells were divided into several parts (each part having a queen-cell), the bees would remain where they were put nearly as well as those would that had a queen. After several experiments in the matter I found the above reasoning to be correct.

Hence, to make my nuclei, I found out how many queen-cells the colony rearing cells contains, as soon as they are sealed over; and then I go to other hives and get as many frames of brood (having plenty of young bees hatching out) as I have sealed queen-cells, less those having queen-cells upon them, in the queen-rearing hive. These frames of hatching brood are placed in the hive with those having the cells; and if one hive is not large enough, a second story is added. Now leave them until 48 hours before the first queen is expected to hatch, when I transfer the queen-cells till each frame contains a cell. The next day these frames are placed one in a hive, thus making as many nuclei as there are frames, leaving one on the old stand, of course. Beside the frame of brood, bees, and queen-cell, I place a frame of honey, and then shut them up close to one side of the hive, by means of a division board. If I wish to be sure that none of the bees will go back, I shut the entrance and hive tight, for 36 hours, thus confining the bees till the young queen is hatched. Open the hive first at night and you will find, upon examination a day or two afterward, that you have a splendid nucleus in good working order.

HOW I GET THE CELLS.

As I believe queens reared under the impulse of natural swarming are superior to those reared in queenless colonies, most of the cells for my queens are built by colonies preparing to swarm. As soon as the first cell is sealed, the first swarm issues as a rule, a part of which swarm, with the queen, is hived, and the rest returned, to keep the brood warm, which is to be placed therein for making nuclei as given above. If but few queen-cells are wanted, enough will generally be built without any interference of the bee-keeper, but as I desire as many as possible from my best colonies, I adopt this plan: In going through the yard spreading brood, etc., I find, a few weeks before swarming, rudimentary queen-cells, or queen-cups started. All these are carefully taken from the combs, and collected in a dish I have for the purpose. At the time I think my best colonies are preparing to swarm, I take a frame of old comb and cut it full of slots, about 1 inch wide, or else take a frame and nail four strips of wood across the inside of it, and by means of melted wax, stick strips of old comb to the under side of these wooden strips. Now, take the embryo queen-cells, and with melted wax fasten them all along on this comb, or in the slots where it is to be set, in place of the center frame in one of the best colonies, which should be selected with care as to all the points required to give the best bees. By this means, a large number of superior queen-cells are secured (as the queen will lay in these cups) and so arranged as to be easily transferred. If from any cause I wish more queens than can be reared from my best colony in this way, I proceed as above till I get the queen-cups attached to the strips of comb, when I go to my best colony and get a piece of comb containing larvæ just hatched. The cells to this piece of comb are shaved off near to the base, when the little larvæ are easily lifted from the bottom of the cells, by means of a goose-quill tooth-pick, with a curved point, and placed in the queen-cups. Twenty-four hours previous to this, I have taken a queen from a populous colony, and at this time I take away all their brood, leaving the combs containing honey and pollen. If they have none, two or three such combs are given them. In half an hour they will show signs of distress by running over the hive and flying about in the air. Now give them the frame with the prepared cells (putting the larvæ in the very last thing) and see what a hum of content they will set up as you leave the frame in the hive. In six hours these cells are supplied with plenty of royal jelly, and in about 12 days as large fine queens will be hatching as can be reared outside of natural swarming.

I see by the last number of the BEE JOURNAL that Mr. H. Alley has a plan whereby he gets his queen cells built in full colonies having a laying queen, and that these cells are built just when and where he wants them. This is something new, and if practical will be of great benefit to those desiring to rear queens. I understand through Mr. Pond, the writer of the article, that Mr. Alley is about to publish a book giving a full explanation of his process of getting queen cells, which will, without doubt, be quite an addition to the apicultural books already published. The above plans may not be as good as Mr. Alley's but I believe them as good as any yet given to the public.

Borodino, N. Y., Nov. 23, 1882.

"Boil it Down."

Whatever you have to say, my friend,
  Whether witty or grave or gay,
Condense it as much as ever you can,
  And say it the readiest way;
And whether you write of rural affairs,
  Or of bees, or honey in town,
Just take a word of friendly advice—
  Boil it down.

For if you go spluttering over a page
  When a couple of lines would do,
Your honey is spread so much, you see
  That the bread looks plainly through;
So, when you have a story to tell
  And would like a little renown,
To make quite sure of your wish, my friend—
  Boil it down.

Prairie Farmer.

Different Kinds of Bee-Keepers.

MRS. L. HARRISON.

Bee-keepers no longer hear the whistling notes of a swarm, or the happy hum of the bees, after a prosperous day, as they evaporate nectar; in lieu of this they love to hear the jingle of clean cash as the result of their labors. There are different kinds of bee-keepers, though; some do not keep bees for profit, as, for instance, the amateurs who rear them for love, or recreation, or to acquire knowledge of insect life. It is an ornament to a lawn to have a nice hive tenanted with beautiful Italians, to fertilize the fruit and to protect it when ripe, from marauding boys. There is yet another class who neither keep bees for profit nor pleasure, but apparently to damage others. This latter class are an intolerable pest. They keep bees in a hap-hazard way, and do not care whether they get much surplus, regarding the bees as a sort of nuisance, and let them spread disease and raise moths *ad libitum*. When they have, by a mere streak of good luck, some surplus honey to dispose of, they bring it to market in bad shape. Sometimes in sulphuring the bees they spoil the honey; sometimes they load in the hive, dead bees and all; or sell "chunk honey" in tubs and buckets; some a little better stored in rough boxes. A person does not find ready sale for this stuff, and as a last resort, puts it in a commission house, saying, "Sell it for whatever you can get."

When a person who keeps bees as a means of profit, comes to market with honey in nice shape, and demands a living price, he is hooted at by dealers who ask, "Do you think I will pay such an exorbitant price for honey? The other day a commission merchant offered me honey at ten cents per pound, and some dark for as low as four cents." A case of this kind occurred not long since, and when the bee-keeper inquired in what shape it was, the dealer owned that it was not in good marketable condition. But he retaliated by saying, "If it was not in sections like yours, some of it was just as good and white, and would taste just as well when eaten."

It would be well for bee-keepers, if they would imitate commercial travelers more, and pack their grip-sack with samples only, when they are reay to dispose of their goods. In this way they can quickly visit consumers, groceries, drug stores and manufactories, and receive a far different reception than they would if they had a wagon load at their doors. And if the bee-keeper needs anything in the line of those to whom he seeks to sell honey, so much the better. A mutual exchange benefits both. It is bad policy for bee-keepers to ship their honey to distant cities and towns, and leave their own locality unprovided for, thus forcing groceries and apothecaries to order these same goods from the cities to which they were sent. The best persons to sell extracted honey, owing to the many adulterations in this class of goods, are its producers. The hue and cry about glucose in honey, benefits local bee-keepers, as those desiring pure honey purchase of those known to be its producers.

Peoria, Ill.

Translated from Bienenfreund by A. R. Kohnke.

Duties of Bee-Keepers in the Spring.

HERR HENNING.

As suggestions for spring work will be in order during the winter, I will attempt to give a few.

As soon as the weather becomes sufficiently warm to permit an examination of the colonies, the apiarist should do so, to ascertain if the bees have plenty of stores; and, if not, they should be fed abundantly, but very carefully, so as not to disturb the bees too much. Water for the bees should be put near the bees in a sheltered place. Queenless colonies should be re-queened, if they are strong enough; if not, they should be united with other weak colonies.

Re-queening, in early spring, should be done by furnishing such colony a fertile queen; never have them rear one themselves. Keep the bees warm. Contract the brood-nest and add frames, one every week or ten days; later in spring, when young bees begin to hatch, additional frames may be added more frequently, and stimulative feeding commenced. For the latter purpose I use the following composition: 1 pound of sugar, 3 ounces of water, ⅓ ounce of starch, 7 grains albumen (dried), 7 grains phosphate of lime, 7 grains carbonate of lime, 7 grains salicylic acid.

Dissolve the sugar in the amount of water given, and boil to a thick syrup. Have the other ingredients very finely powdered and well mixed; add them, stirring continually, so as to well incorporate them in the solution of sugar. The sugar should be of the very best, not showing a bluish cast, which would indicate artificial coloring. The starch should also be pure—odorless and tasteless. All the ingredients can be obtained in a good drug store, with, perhaps, the exception of sugar. If you cannot get the albumen (white of eggs) there, you may prepare it yourself by spreading it thinly on window glass, and drying it in a warm temperature, not higher than 135° F. After it has thoroughly dried it may be scratched off, and by the aid of a druggist's mortar, converted into a fine powder.

After having stirred in all the ingredients, let it boil 3 or 4 minutes, pour it into frames which fit the hives, lay your frame on an even smooth board and see that no sugar runs out. In order to better prevent running, a piece of paper, larger than the frame should be pasted on the one side of the same, bending the edges and pasting them also to the different bars of the frame; then lay the frame on the board, with the paper next to it, and cast your cake.

After it has cooled it will stay in the frame and should be hung in the hive as near the brood-nest as convenient, the paper on the off-side. If the colony has but little honey, two such frames should be given, one on each side of the brood-nest; but, if there is plenty of honey, one will be sufficient to enable the bees to raise brood and bees enough to crowd the hive when the honey season arrives; to accomplish this, such frames must be given from 4 to 6 weeks before the bees are wanted to gather the honey when the wave strikes your locality.

Erfurt, Germany.

For the American Bee Journal.

New Plan for Introducing Queens, etc.

E. H. THURSTON, M. D.

The BEE JOURNAL is a regular and most welcome visitor; it make its appearance at my office every Wednesday almost as regular as the day itself, and is always filled with the most interesting and valuable information on apiculture of any publication I have ever read.

Allow me, Mr. Editor, to relate briefly a few experiments and give some thoughts on the introduction of queens. As I do not wish to consume much of your valuable space, I will touch lightly upon ventilation and wintering at present, but perhaps at some future time may give more upon these subjects. It has been said "Modern bee-keeping is very modern indeed," and it is well said; with so many practical and scientific investigators, how could it be otherwise?

My attention was attracted by an article in the BEE JOURNAL for Oct. 18, page 661, by Prof. S. J. Robbins, on the "Use of Onions when Uniting Bees."

A few days after reading the article I transferred a colony of bees from a box to a frame hive. I had a few bees with a queen in a Langstroth observatory hive; not caring to winter them alone, and, wanting the combs for my new colony as well as the bees, I concluded to try the onions while uniting the bees.

I placed some onions in the observatory hive and in my new one; left them for 24 hours; I then removed the bees and combs and placed them in the new hive; there did not at the time appear to be any disturbance; they seemed to get along nicely, but on the next day I found my experiment had resulted in the death of all the bees from the observatory hive. I do not consider this a fair trial of the use of onions, and shall some time try it again.

Prof. R. spoke of using the onions for introducing queens, upon the theory of their changing the scent of the bees; this gave me a new idea. The thought occurred to me that if onion would do so well why would not some article having a stronger odor do better? Asafetida suggested itself; also a new method of introducing queens by the use of asafetida water, thrown on the queen and bees by a hand atomizer; the queen being let loose on the combs, among the bees; at the same time spraying among them quite thoroughly.

Here was a chance for experiment; and all that was lacking was the fact that I had no colony to put my queen in. My friend and neighbor S. N. Replogle, who by the way is one of our best and most successful bee-keepers, a man of much experience and a careful observer, and practical in every respect, informed me that he was in need of a queen for a queenless colony that had been queenless for two months. I made known to him my plan of introducing, and told him I would give him the queen if he would try the experiment, to which he readily assented.

I prepared the water by using half a drachm of tincture of asafetida to 2 ounces of water; gave him a hand atomizer and he proceeded as follows: he sprayed the bees in the hive through the entrance; the hive was then opened and the bees sprayed again; the queen in the cage was now sprayed and a center frame taken out, put up in a convenient place, the bees on it thoroughly sprayed and the queen turned loose among them; at the same time spraying the bees and queen lightly and watching her movements closely. He said she, as well as the bees, were considerably excited at first, but no attack was made upon her. After about five minutes the excitement passed off and they became quiet. He then sprayed the frame bees, and also the bees in the hive and the frame was returned to the hive which was at once closed and remained so until the next day, when he opened it to see what the results had been. He found that all was peace and harmony; the queen had commenced laying and all hands were at work.

Mr. R. informed me that this colony had refused three queens, and that about three weeks before trying this experiment he had given them a frame of brood, that they had attempted to rear a queen, but as he thought, had failed; but about a week after introducing my queen, he found her all right, but, to his astonishment, he also found a small, runty queen, with no wings, in with her; and he is now satisfied that she was in the hive when he introduced my queen, and that she was there when he attempted to introduce the last one of the three before mentioned.

I do not claim anything wonderful for this method, nor do I know whether it is new or not, but I think it an experiment worth trying, and I would like to hear of some one else trying it.

Asafetida is somewhat of a disinfectant, and I think it would not be a bad plan to spray all colonies occasionally with the water.

I have consumed more space already than I had intended, but with your permission, Mr. Editor, I will add a few words touching ventilation and wintering.

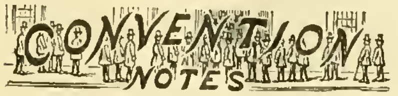
The use of the enameled sheet I consider one of the very convenient thing, but my impression was when I first saw it spoken of, that it would not permit the escape of the breath of the bees, and would retain too much of the animal heat; that the cold air on the outside would condense the heat, causing too much moisture in the hive.

To avoid this I punch the sheets full of small holes, for spring and fall use, and for winter I make an opening in the center of the cloth, 3x6 inches, cutting on one side and both ends of the opening and turning the flap back; over the opening I place a piece of wire cloth and then put on the chaff cushion, having first placed Hill's device, or something of the kind, over the frames under the sheet. This I think gives a thorough ventilation.

I was pleased to find in the October number of the BEE JOURNAL, page 659, the plans of Mr. James Heddon for wintering, as it was the plan I had determined on. I think the addition of lime to the sawdust would be of great benefit. I shall also add lime to my chaff cushions. I am of the opinion that if chloride of lime, camphor, and articles of a disinfectant and absorbent nature, were used in and around our hives, during winter and summer, that we would be troubled but little, if any, with cholera or foul brood.

I am more favorable to wintering out doors than in cellars, as I think it approaches nearer to nature. It gives the bees better ventilation as well as the advantage of a cleansing flight during favorable winter weather.

Hagarstown, Ind., Nov. 17, 1882.



Local Convention Directory.

1882. *Time and Place of Meeting.*

Nov. 29-30, Western Michigan, at Grand, Rapids.
Wm. M. S. Dodge, Sec.
Dec. 6-7, Michigan State, at Kalamazoo.
T. F. Bingham, Sec., Abronia, Mich.

1883.

Jan. 9.—Cortland Union, at Cortland, N. Y.
M. C. Bean, Sec., McGrawville, N. Y.
9.—Ohio State, at Columbus, Ohio.
D. Spear, Sec., Cardington, Ohio.
11, Nebraska State, at Wahoo, Neb.
Geo. M. Hawley, Sec.
16.—Eastern N. Y., at Albany, N. Y.
E. Quakenbush, Sec., Barnerville, N. Y.
16-18, Northeastern, at Syracuse, N. Y.
G. W. House, Fayetteville, N. Y.
19, 20.—Mahoning Valley, at Berlin Centre, O.
L. Carson, Pres.
Feb. 3.—Northern Ohio, at Norwalk, O.
8.—Maine State, at Dexter.
Wm. Hoyt, Sec.
April 5.—Utah, at Salt Lake City.
E. Stevenson, Sec.
May 11.—Iowa Central, at Winterset.
J. E. Pryor, Sec.
—, —Texas State Convention, at McKinney.
Dr. W. R. Howard, Sec.
Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

☞ The Ohio State Bee-Keepers' Association will meet in Columbus, in the rooms of the *Ohio State Journal*, on Tuesday and Wednesday, Jan. 9 and 10, 1883. A full attendance of members, and all interested in bee-culture, is requested, as matters of interest and importance will be discussed.

DR. H. BESSE, Delaware, O., *Pres.*
DANIEL SPEAR, Cardington, O., *Sec.*

Maine Bee-Keepers' Association.

The regular quarterly meeting of the Maine Bee-Keepers' Association was held at Bangor, on Thursday, Nov. 9, 1882.

The President, Mr. F. O. Addition of Dexter, called the meeting to order, and Mr. Wm. Hoyt, the Secretary, read the report of the last meeting.

Several new members signed the constitution, among them a number of ladies; and it was noticeable that both during the forenoon and afternoon, there was a good sprinkling of ladies who were among the most interested participants in the convention. The Association now has a membership of about fifty, embracing the leading bee-keepers in all parts of the State.

After some discussion it was voted to hold the next annual meeting at Dexter, on Thursday, February 8, 1883.

It was a matter of much regret to all bee-keepers present at the convention, that Mr. R. S. Torrey, who had made all arrangements for the meeting, was prevented, through severe illness, from being in attendance.

In the afternoon, after disposing of some business, the following papers were read in the order named: "On Wintering Bees," by R. S. Torrey, Bangor; "Bee-Keeping, Past, Present and Prospective," by Lucian French, Dexter; "Wintering and Springing Bees," by O. L. Sawyer, Gardiner; "Bee-Keeping for Ladies," by I. F. Plummer, Augusta. In the absence of Mr. Torrey his essay was read by Mrs. Torrey, herself a most thorough and accomplished person in the science of bee-keeping.

WINTERING BEES.

Mr. French said that the first requisite to successful wintering was a strong colony, not less than three quarts, to give an adequate idea of quantity. Then some protection must be given, the amount depending upon the degree of cold the bees have to withstand. Next is a young and prolific queen. Then it is sure the colony must have plenty of stores. He believed that from twelve to fifteen pounds of honey were sufficient on which to winter a colony. Mr. French detailed at some length, but in an interesting manner, his various ways of wintering bees, and gave an account of some experiments in wintering which he intends to try the coming winter. He has had success in wintering hives on their summer stands by providing them with an outer box of rough boards, which left from six inches to a foot of room between that and the hive that was filled with chaff. One foot of chaff packing was also put on top of the hive. A report on some eight or ten different ways of wintering which he intends to try in his apiary of obout forty colonies, he hopes to present to the Association at its next summer meeting. He is sure that more depends upon the vitality of the colony than any other one thing; and that the thing most to be dreaded is spring dwindling. Human wisdom has not yet devised the best way of wintering bees, but Mr. French lives in hopes that it will soon be accomplished.

Mr. Plummer made some interesting remarks on wintering, and on providing artificial pasturage for bees. As to the former subject, he said that in different years, and in different places, bees had sometimes wintered well in all kinds of situations. He thought one of the most difficult features of wintering was to carry the bees through from the middle of March to the middle of May, successfully. In regard to the latter he advocated with much earnestness the providing of artificial feeding ground, as without it, in the older portions of the State he thought we could not get so mch honey from bees as was desirable. In some years, probably, owing to atmospheric influences, white clover will yield little or no honey. He thought highly of sweet clover and borage, with the latter being especially well pleased. The question with him was, as to whether we should grow crops for honey alone, or grow such crops as would yield grain after the honey had been gathered. He was going to sow half an acre of sweet clover another spring. As to borage, he had had a small piece the past season, which was in bloom perpetually from July 1st to very late in the fall, and the plants had been fairly black with bees from morning till night. From considerable experience he had but a slight opinion of buckwheat as a honey plant.

Secretary Hoyt said he had wintered one colony very successfully last winter by covering it "head and ears" with buckwheat straw, on its summer stand—the straw being piled on pretty thick. On April 5th last, he opened one side, and after getting into the straw a few inches found it perfectly dry. There was no loss to this colony, and it did not eat but little honey, as the top of the frames had sealed honey on them. The colony was strong, one of his best. He was intending to try half a dozen hives this winter in the same way—it was at least a cheap means of wintering. He thought if bees could be kept perfectly dormant in winter, in whatever location they were, and could be in a normal condition in the fall (*i. e.*, young bees) they would winter well; and should not raise brood or pollen till in the best possible condition to breed for summer say the last of May or the first of June. He knew of a friend had wintered bees in square boxes on the south side of a bank where the snow had drifted completely over them, and where they did not thaw out for the winter. They came out in as good condition as others kept in a different way. If bees are strong, they can fly toward spring, or even in winter, if the sun is warm, alight on the snow and rise again before becoming cold.

BEE PASTURAGE.

In regard to pasturage for bees. Mr. Hoyt thought it a subject of much importance, but said he believed we could not afford to grow a crop for honey alone, as a general thing. He believed we should grow white, and the small Western red clover for this purpose. He had sowed borage to some extent. It was a plant that was in flower from July 15th to the 2d of September, and when in flower was fairly black with bees feeding upon it from early till late, every fair day. They would leave goldenrod and buckwheat to work upon it. Mr. Hoyt, in speaking of the value of pasturage, remarked that he had one colony that gathered twenty-five pounds of honey in a single week on bass. If such pasturage as a bass forest afforded could be continued through the season, what stores our colonies would gather! In regard to buckwheat he had sowed it for six years, and thought it had paid almost every year, as he usually raised twenty bushels per acre.

Mr. French gave some of his ideas on bee pasturage. He has provided sweet clover, borage, buckwheat, Simpson's honey plant, and the spider plant, at different times, but did not think much of the spider plant, as he found his bees did not work upon it. He should try it one season more and if the bees did not work on it to a greater extent than formerly, should discard it. The bees worked on borage all the day long. He thought they worked but very little on red clover.

Brief remarks were made by Mr. J. E. Bennoch of Orono; Mr. Sampson of Oldtown; Mr. Wilmont, a California bee-keeper who was present, and other gentlemen, after which the convention adjourned.—*Home Farm.*

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Iowa Central Convention.

The Iowa Central Bee-Keepers' Association met at Winterset, on Friday, Nov. 3, 1882, and was called to order at 10:30 a. m. with Pres. A. J. Adkison in the chair.

No report of the last meeting read, the minutes having been lost.

The following officers were elected for the ensuing year: President, A. J. Adkison, Winterset; Vice President, J. W. Graham, Winterset; Secretary, J. E. Pryor, Arbor Hill; Treasurer, Mrs. Mary Pryor, Arbor Hill, Iowa.

From 94 colonies of bees at the beginning of the honey season of 1882, there was reported an increase of 135 colonies, and a production of 1,943 pounds of comb honey, 6,980 pounds of extracted honey, and 48 pounds of wax. Of the 232 colonies reported at the close of 1882, there were 94 Italians, 127 Hybrids, and 11 Blacks. Kinds of hives used: 150 Langstroth, 50 North Star, 8 box hives, and 2 American.

This is hardly a fair representation of the bee-keepers within the bounds of the Association, several of the principal apiaries not being reported.

After receiving several new members and discussing methods of wintering, etc., the meeting adjourned to meet in the council room in the Court House at Winterset, on Friday, May 11, 1883. J. E. Pryor, *Sec.*

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☞ The annual meeting of the Cortland Union Bee-keepers' Association will be held in Cortland, N. Y., on Tuesday, Jan. 9, 1883.

M. C. Bean, *Sec.*, McGrawville, N. Y.

Read before the N. A. B. K. S.

How to Cure Foul Brood.

D. A. JONES.

This is a subject on which much has been said and written; and there seems to be a great many and varied ways of curing it; some of them, however, are rather difficult, and not within the reach of every bee-keeper, as well as being slightly costly.

I purpose setting forth in the following the most easy and cheap, as well as the surest method that has yet come under my notice, and one that comes within the reach of every apiarist on however large or small a scale. This mode of procedure (by starving) has never yet failed when properly carried out, and I have tried it in many cases in our country.

I shall give the process, first where there is no brood or where one does not care to save it; and secondly, where there *is* brood in the hive, and one is desirous of saving it. First, smoke and drum the bees until they have all gorged themselves with honey; and it is important that they be all well filled, otherwise that portion of them whose sacs are not full will not live the time that the other portion would be required to starve, to affect the cure; hence the necessity of having their sacs filled evenly. They should not be allowed to settle down again after having gorged themselves; the operations when once commenced should be carried through without the loss of any time, as a short space only would require to elapse, if left quiet, before some of them would replace their honey in the cells again, when the work of smoking, etc., would have to be repeated. After they have been smoked and drummed sufficiently, shake the bees into a clean hive or box, over which place a wire-cloth cover, care being taken that none escape, as one bee escaping and entering another hive would, in all probability, spread the disease, as it is by the depositing of the diseased honey in the cells of clean colonies that this disease is generally contracted. To prevent the spreading of the disease, the operations should be performed either early in the morning or late in the evening, when no bees are flying; or if the work is done during the day, it should be beneath a wire tent, or in some other place of confinement, where there is no chance of any of the bees from the affected colony escaping. These precautions are required only where a portion of the yard is diseased; but where the whole apiary is attacked, the work may be carried on with impunity.

When all the bees have been secured in the hive or box covered by the wire cloth, carry it to a cool, dark place, and there lay it on its side; and why? First, because when in a dark, cool place the bees will cluster and remain more quiet than when subjected to light and heat; and secondly, when clustering in the top of the hive; and were the hive or box to be placed on its proper bottom they would all cluster on the wire cloth, and thus prevent a proper ventilation, which would cause suffocation; whereas, by placing the hive or box on its side, the other side would then become the top; and on this the bees would cluster, thus securing a free circulation of air. The temperature of the place where the starving takes place should be from 50° to 55°, never above 60°, and a cellar would therefore be the best place in hot weather. They should then be left alone, perfectly quiet, from 80 to 120 hours, or until the bees are noticed crawling around the bottom of the box or hive in a starving condition, and a few of them are dead; then put them in a clean hive with clean comb or foundation; if comb, there should be honey in it, and if there is not, the bees should be fed honey or sugar syrup, as also should they be fed when foundation is used, and remove them to a place one or two miles distant, where let them remain until the whole yard is cleansed, when they may be returned to their original stands in the old yard. While the bees are starving, scald the hives and frames from which the affected colonies have been taken; extract the honey from the combs, which may be boiled and fed back to them again; render the combs into wax; and the wax, manufacture into foundation, and place it in the scalded frames, for use in the scalded hive, into which put the bees, after their allotted time of starving has expired.

Great caution should be exercised to see that the queen is placed in the hive or box in which the bees are to starve, unless in the case where the colony has been queenless some days previous, when they will do almost as well without one.

Now, in the second case, where one desires to save the brood, proceed as in the former instance, with the smoking and drumming and transferring of the bees and queen to the hive or box for starvation, only sufficient being left in the diseased hive to nurse the brood.

With those placed in the clean hive or box, the operations will be the same as heretofore described. The remaining brood and bees, if weak, should then be doubled up and otherwise strengthened as much as possible; and when hatched out, put through the same process as the others. This method, if properly carried out, will invariable prove successful. It was my intention to have referred to the various causes of the disease; but I find that my paper is already sufficiently lengthy. I will therefore defer it at this time. Before closing, I may say that, by referring to page 103 of the AMERICAN BEE JOURNAL for 1882, in its issue of Feb. 15, some further explanations may be found regarding this method of curing foul brood by *starvation.*

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☞ The Western Michigan Bee-Keepers' Association will meet at Supervisors' Hall, in the city of Grand Rapids, on Wednesday and Thursday, Nov. 29th and 30th, 1882. The co-operation of all bee-keepers of this section is desired.

Wm. M. S. Dodge, *Sec.*

☞ The 17th annual convention of the Michigan State Bee-Keepers' Association will be held in Kalamazoo, Dec. 6 and 7, 1882. All interested are cordially invited to participate in the discussions—which will embrace the live issues of the Apiculture of to-day. Thomas G. Newman, A. I. Root, D. A. Jones, Prof. A. J. Cook, and many other distinguished apiculturists are expected to be present. Low rates of board at hotels have been secured.
T. F. BINGHAM, *Sec.*, Abronia, Mich.

☞The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning Co.; O., in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th. L. CARSON, *Pres.*

☞ The Nebraska State Bee-Keepers' Association, will hold its annual session in Wahoo, Saunders county, Neb., commencing Thursday, Jan. 11th, 1883. Arrangements have been made with the railroads to secure 1¼ fare for the round trip. The Saunders county Bee-Keepers' Association will furnish entertainment free to all visiting apiarists. Bee-keepers from neighboring States will be welcomed.
T. L. VONDORN, *Pres.*
GEO. M. HAWLEY, *Sec.*

SELECTIONS FROM OUR LETTER BOX

Report for 1882.—Basswood is very scarce in our neighborhood, and there are no other blooming trees, except fruit trees. White clover was a fair crop here this season. Therefore, I am obliged to resort to planting to make the business a profitable one. I sowed sweet clover in the spring, on sandy soil; it came up very nice, but did not bloom. I also sowed about three acres this fall with wheat, and will resow the same ground again in the spring, as the first time it was sowed thin with that intention; there being so many different reports about sweet clover during the last year, as to the time of sowing and its value afterward; that every man must do his own experimenting in the best way he can. There will be one consolation, I will have the pleasure of knowing some of its traits when it once comes to perfection. Last year I was told to sow catnip, and motherwort in the fall; I did so and failed, now I shall sow in the spring; should I fail on these three plants then there will be a small apiary for sale; should I meet with success, and learn more properly the ways of success of the apiary, I may hereafter be able to give a more satisfactory report upon apiculture. I started the season with 3 colonies, increased to 12 by natural swarming and returned 4 swarms; I used foundation in the brood chamber and surplus boxes. I obtained 201 lbs. comb honey; average, 67 lbs. spring count. The honey sold at 20 cts. per pound. $13.40 per colony.
Elida, O. JNO. G. RIDENOUR.

A Natural Bee Hive.—MR. EDITOR:—I send you a sample bee hive, with the side cut away, showing the inside arrangement. It maybe that you can see progression in it.
W. H. BUSSEY.
Chicago, Ill., Nov. 20, 1882.

[It is a hornet-bee's nest, and we suppose was intended to call attention to the 7 dead-air spaces between the inside and outside of the nest, which Nature must have taught these insects to have in order to resist the cold in autumn, and protect the brood, during the fall. There is some difference, however, between their thin paper hives and the board and straw, used for bees in winter. as also much difference between the cold weather during autumn and that of the winter from January to March. We have no doubt, however, that dead-air spaces are as good as any other method of winter protection.—ED.]

4,000 lbs. of Honey from 19 Colonies.—My report is as follows: Extracted honey, 3,000 lbs.; comb honey in one-pound sections, 1,000 lbs. I have also 100 full Langstroth and American frames extra for spring feeding, if next spring should be late. I increased to 71 from 16, spring count. All this increase has come from 11 colonies and their increase, as I have 8 colonies in American Long-Idea hives containing 16 full-size frames and 16 half-frames that did not swarm this season. I increased by natural swarming, giving old colonies an old hive and a laying queen as long as I could keep up with them. I have returned 32 swarms, and 3 went to the woods. Honey-flow was almost continuous from June 4, to Sept. 23, and since that another short flow of about a week, so that the lower stories of many of the hives are honey-bound.
S. H. MOSS.
Colchester, Ill., Oct. 23, 1882.

Ready for Winter.—To-day I have finished my packing my bees for winter. I have packed them in a clamp, similar to the one described by D. A. Jones, except where he says "set the hives about six inches apart," etc. I have put mine one against another, and I leave the propolized cloths on my hives. They have been prepared for winter for some three weeks and the cloths were well stuck fast. I use no packing except buckwheat chaff, which has never failed, even when other material did. In answer to Miss H. F. Buller in the BEE JOURNAL for Nov. 8, where she asks whether I close the upper fly holes when I raise the lower hive, I will say that I always close all but those at the bottom. In place of extracting, if I have the combs, etc., and honey is plenty, I put a third hive on, by parting the two and putting the third between the first two, or I extract from the lower hive at any time, seting the upper one on the stand while extracting the lower. There is no brood below, unless the colony has a very prolific queen.
W. S. BAIR.
Rollersville, O., Nov. 15, 1882.

Care of Empty Combs.—Will it injure empty combs to be left in a hive, without bees, out-of-doors, all the winter? JOHN RUDD.
London, Ont., Nov. 13, 1882.

[There need be no fear of worms for they cannot develop except in warm weather. Spread the combs 2 inches or more apart and they will be safe.—ED.]

My Season's Work.—I had 3 colonies of bees last spring, and last summer obtained six natural swarms. I hived them all on empty extracted combs. I made two of them into two-story hives for extracting, and I extracted 200 pounds of excellent honey from the two. From the other 7 colonies I obtained 200 pounds of comb honey, and they have plenty of honey for winter. I sold the honey at 10 cents a pound for the extracted and 15 cents for the comb honey. I sold all my honey at home at the above price.
WM. ROBERTS.
Vaughansville, O., Nov. 22, 1882.

Sensible Bees?—I have packed 135 colonies of bees; all strong but about 6, which are a little weak in numbers. If they do not go to rearing young bees this warm weather I think they will winter well. Nothing makes me dislike men or bees so much as to see them try to do what they cannot or ought not to do.
E. B. SOUTHWICK.
Mendon, Mich., Nov. 22, 1882.

Wintering Bees.—I will give my experience during the season of 1880-1 and 1881-2; which were the two extremes of temperature during the past 26 years. In 1880-1 I took charge of the Omaha apiary, consisting of 107 colonies, which had been packed during the month of October, 1880, in chaff, thus: they were put on 5 frames, with division boards on each side and the spaces filled with dry chaff; a box 4 inches deep, with muslin bottom, filled with chaff, was put over the frames; then the hives were covered with slough grass. In January the snow filled the apiary so full that I could scarcely see the location of the hives; then came a rain causing the snow to melt, for about 2 days in the beginning of February; after which, it all froze into one solid mass. In March, when it was warm enough for the bees to fly, they knew nothing of the outside world, for they were completely closed in; the larger portion had to be released by chopping them out. After shoveling out the snow from 18 to 24 inches, I found from 4 to 6 inches of solid ice at the entrance and had to use a small chisel in cutting it out, so that the bees could have their first flight, March 23. Out of 107 colonies 98 came through all right, with plenty of young bees. Now, will some apiarist tell me what saved these bees through that hard winter when 75 per cent. of the bees in the country perished? G. ROUSE.

Wahoo, Neb., Nov. 20, 1882.

Cause of Foul Brood.—Will some one through the Weekly BEE JOURNAL inform me of the *cause* of foul brood? I have looked for it under that heading, in Cook's Manual, but could not get a description of it. I am only young in the business and would like to get all the information possible. I like Cook's Manual very much. I bought my bees, which are blacks, last year, and I am not at all satisfied with them. I shall Italianize them next spring. How early would it be advisable to do so? How do you tell foul brood from chilled brood? When I packed my bees for winter I noticed on some of the outside frames a few cells capped over; they were not together, and the rest of the frames were empty. On uncapping some of the cells they contained a dark substance which I took for chilled brood, but I would like to be sure about it. There is an unpleasant smell from it, but not very bad. We are having a very fine fall, this year; the season is something like the spring, one month late.

W. H. WESTON.

London, Ontario, Nov. 23, 1882.

[Our correspondent is referred to the article by Mr. D. A. Jones in this issue of the BEE JOURNAL, on foul brood, for the information he desires. Mr. Muth and Mr. Kohnke have published pamphlets on the subject, which it may be well to read and compare. Transferring should be done as early in the spring as the weather will permit, and before there is much honey in the hive.—ED.]

My Bee Report.—As my bees are now all in winter quarters I will give to the readers of the BEE JOURNAL an account of my season's work. I commenced the last season with 10 colonies of bees, 5 of which were weak. By following the advice of Mr. Doolittle I have increased them to 40 strong colonies, and 6 nuclei consisting of from 4 to 7 frames each, making 46 in all, to winter. I obtained from 800 to 1,000 pounds of honey—one-half each comb and extracted. I have 20 colonies packed on the summer stands, in flax-straw; the rest are in my cellar under the kitchen, 10x14 feet, partitioned off from the main cellar and ventilated, so that I can keep the bees in such temperature as I may desire. I have one colony with 2 queens, which have resided there in harmony for 2 months, and both were alive when put into winter quarters. I cut one wing of a queen last spring, and she was superseded, but as Mr. Doolittle says it does no harm to them, to clip their wings, I will try again.

J. A. WICHERTS.

Matteson, Ill., Nov. 20, 1882.

Questions.—Is a square hive better to winter in than a long one? In other words, is the Langstroth hive as good to winter in as any other? Mr. Manum's hive you call "a modified Langstroth." The brood-box holds 12 frames 9½x12 inches. I mean, more particularly, for out of door wintering. Mr. Manum admits that it costs more to make his chaff hives than it would to build a house, or put them in the cellar, and now the question is, are bees *better* wintered out of doors? I have been told they do not dwindle so much in spring, wintered on their summer stands. Are they better in other respects? If so, it will pay to build chaff hives. Mr. M. has 500 colonies. What do you think of the "Given Press" as compared to other machines?

A. P. FLETCHER.

Ludlow, Vt., Nov. 12, 1882.

[If for out-door winter alone we should prefer a square frame—but for all purposes we prefer the Langstroth hive and frame. As to the manner of wintering bees there is a diversity of opinion, and as yet the point is unsettled. We have not yet concluded to give any decision on the chaff hive. Wait until next spring and then we may be able to decide more intelligently. Some like the "Given Press" and some do not. Mr. Heddon thinks it as good or better than others.—ED.]

A Humbug or Swindler, which?—About the 1st of March, 1882, I sent $5 to J. J. Ritchie, of 142 Linn St., Cincinnati, Ohio, for the purchase of a Mitchell honey extractor. I waited until April for the extractor to come, then I wrote him a postal card, and told him to send it soon, etc. To this I got no answer; then I wrote a letter and said, that the extractor must come or else the money, or I would expose him. This he answered, as follows: "Cincinnati, May 1st, 1882. *Dear Sir:* Your favor of 27th April at hand; your register was received, but no postal card. Your order was sent to our factory at Indianapolis, and I supposed your order was filled. Will see what the matter is and have your extractor sent.—J. J. RITCHIE." I have never heard any more from J. J. Ritchie or the $5 either. I got tired of waiting for it, so I enclosed $7 to a well-known supply dealer, and I received an extractor in due time, in prime condition. It pays to deal with an honest man. JOHN F. SELLERS.

Hamlet, Ill., Nov. 16, 1882.

Report for the Past Season.—I had 29 colonies in the spring, and have increased to 40. I have obtained 958 lbs. comb honey and 158 lbs of extracted.

F. H. SEARES.

Girard, Pa., Nov. 17, 1882.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., November 27, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The supply of extracted honey is fully up to the demand. My quotations are: 6½c. for dark and 8½c. for light, delivered here.

BEESWAX—It is quite scarce. I am paying 27c. for good yellow wax, on arrival; dark and off colors, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—Demand is good for extracted honey by the barrel for manufacturing purposes and for table use. The demand is very good for honey in 1@2 lb. jars. A good deal of comb honey could be sold if we had a good article at a rate within the views of the consumer; *i. e.*, which could be sold at 20c. in the jobbing way and 25c. at retail.

We pay 7@10c. for extracted, and 16@20c. for good comb honey in sections

BEESWAX—Is in good demand at 20@27c. per lb. on arrival. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey does not keep pace with the receipts. There is a large surplus on this market at present, and prices are from 2 to 3c. lower than last month.

We quote: white comb honey, in 1@2 lb. sections, 17@18c. Dark comb honey, hardly any demand. It is held at 12½@15c. Extracted—White brings from 9@10c.; dark, 8@9c.; kegs, half-barrels and casks bring about same price.

BEESWAX—Choice Yellow, 30c.; dark to medium, 18@25c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—A sailing vessel this week took 1,018 cases for Liverpool from a packing house. The market is quiet. Such qualities as are in good supply, dark and medium, are in poor demand.

White comb, 18@20c; dark to good, 12@15c; extracted, choice to extra white, 9@10c.; dark and candied, 7½@8½c.

BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Was in better demand and sales were freer; prices steady. Comb sold at 16@18c. in lots; extracted at 8@9c. in barrels; strained, 6½@7c.; choice, in small lots or fancy packages, brings more.

BEESWAX—Prime bright steady at 26@27c.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—There has been no change in honey the past week. No. 1 white, in 1 ℔ sections, continues in good demand at 21@22c. per pound. No. 1 in 2 lb. sections, is also in good request at 19@20c. Second grade, less active, at 1@2 cents ℔ lb. less. Extracted, in al shapes, was dull and very little sale. Some Louisiana honey, rather dark, in barrels,, was sold at 9c.

BEESWAX—Prime quality, 25@28c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is a continued fair inquiry for prime lots of honey, and prices held steadily. Extracted honey quiet and unchanged.

We quote: White clover, fancy, small boxes, 22@25c; white clover, fair to good, 18@22c.; buckwheat, 16c.; extracted clover, 10@13c.; extracted buckwheat, 9@10c.

BEESWAX—There is only a moderate movement of wax, but prime lots are held about steady. Western, pure, 29@30c; Southern, pure, 30@31c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—30c.

CROCKER & BLAKE, 57 Chatham Street.

☞ New subscribers for the Weekly BEE JOURNAL for 1883, can obtain all the rest of the numbers for this year by sending $2 to this office.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN BEE JOURNAL
ESTABLISHED IN 1861

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A line of Agate type will contain about **eight words**; fourteen lines will occupy 1 inch of space. Transient Advertisements payable in advance.

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Discount, for **1** year, in the SEMI-MONTHLY alone, **40** per cent., — **6** months, **20** per cent.— **3** months, **10** per cent.—if wholly paid in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ A few of our subscribers are in arrears for the present year—having requested us to continue, and they would pay soon. Will all such please take this as a request to send on the two dollars with a renewal for next year, if possible.

☞ The Amerian Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

New Premiums for 1883.

As the season for reading has now arrived, we hope that each of our subscribers will endeavor to send at least one new subscriber for the Weekly BEE JOURNAL for 1883 and thus not only help on the cause of progressive bee-culture, but assist in sustaining the only Weekly bee paper in the world.

Providence has smiled on the bee-keepers during the past season, and as a general thing they are abundantly able to procure a good assortment of bee-literature.

In order to encourage every one who keeps bees, be they few or many colonies, to thoroughly read the many very interesting books on bee-culture, now published, we have determined to make liberal offers, which will be available until January 1, 1883, as follows:

To any one sending us $8 for any books they may select from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for one year.

To any one purchasing $4 worth of books, selected from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for six months or the Monthly for one year.

Any one sending us a club of **two** subscribers for 1883, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6,** we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8,** we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10,** we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly is now permanently established, and will be continued as heretofore.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ The BEE JOURNAL is mailed at the Chicago post office every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

☞ Articles for publication must be written on a separate piece of paper from items of business.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

Subscription Credits.—After sending subscriptions to this office, we would respectfully ask every one to look at the label on the wrapper of the next two papers, and there they will find the credit indicated thus: Those who have paid for the first six months of next year will find "June 83" after their names. Those who have paid for the whole year will find "Dec. 83" on their papers. The credit runs to the *end* of the month indicated. If the mark is "Dec. 82," it means that the subscription is paid until the end of the present year. Please remember that the credit given on this label is a sufficient notification of subscriptions due and receipt for payments made. If not so indicated within two weeks after sending money to us, you may be sure something is wrong, and should write to us about it. It will save annoyance and trouble if our subrcribers will give this matter due attention.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

◆

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

◆

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

◆

☞Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

☞ The time for the usual winter rush of correspondence is here, and we wish to impress upon all our patrons the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address that we already have on our books.

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal, ...	$2 00..	
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Bee-Keepers' Magazine (A.J.King).	3 00..	2 60
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Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper........	2 60..	2 40
The 6 above-named papers.......	6 00..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881...............	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

◆

☞ We want a copy of No. 41 of the BEE JOURNAL for Oct. 11, 1882. If any one has that copy to spare and will risk sending us a postal card saying so, we will take the first offered and give in exchange any 25 cent pamphlet selected from our Book List.

◆

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

☞ The result of the election has proved a grand success, but not more so than Kendall's Spavin Cure is proved to be every day. 48w4t

Advertisements.

THE AMERICAN BEE JOURNAL is the oldest Bee Paper in America, and has a large circulation in every State, Territory and Province, among farmers, mechanics, professional and business men, and is, therefore, the best advertising medium.

"BEE-KEEPERS' HANDY BOOK."

22 Years Experience in Rearing Queen Bees.

A book written and published by

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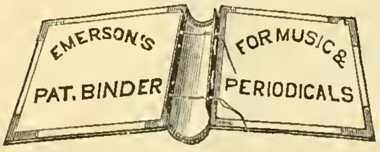

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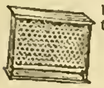

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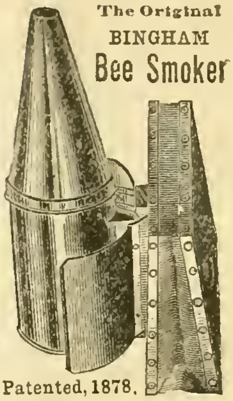

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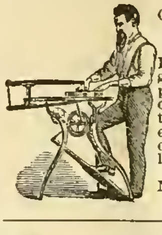

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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.................................. 769
The Ignorance of the Past Ages........... 770
National Agricultural Convention. 771
A Conundrum.................................. 771
Clubbing List.................................. 771

Among Our Exchanges—

What Bees Accomplish......................... 771
Follow Some Well-Digested Plan.......... 771
Curious Observations of an Early Writer. 772
The Labor of Obtaining Correct Statistics. 772
Feeding Bees.............. 772

Correspondence—

A Charge to the Bees......................... 773
The "Coming Bee" for Business.......... 773
Comb vs. Extracted Honey................. 773
How I Introduce Queens.......... 774
Statistical Report for Maine... 775
The Cheap Queen Traffic.................... 775

Convention Notes—

Local Convention Directory................ 776
Oregon Convention........................... 776
Southern Cal. District Convention......... 776
Courtesy in Journalism...................... 777
Convention Notices........................... 778

Selections from Our Letter Box—

Swarming, Moving Bees, Etc................ 778
Report.. 778
No Honey Except from White Clover..... 778
It Pays to Plant for Honey.................. 778
$28.15 Per Colony 779
The Past Season in Scotland............... 779

Business Notices—

Honey and Beeswax Market................ 779
MONTHLY BEE JOURNAL FOR 1883........ 780
Few Premiums for 1883.................... 780
Subscription Credits... 780
Apiary Register............................... 781
Honey as Food and Medicine.............. 781

☞ We regret to learn that Mr. William Williamson, of Lexington, Ky., who has been, for 2 years, Secretary of the Kentucky State Bee-Keepers' Association, has been in very poor health during the past summer. He is a progressive bee-keeper and a lover of the art of bee-culture, and, we hope, will soon be restored to his usual good health.

◆

☞ Messrs. J. Oatman & Sons have sold all their very fine and magnificent crop of honey in the comb to Messrs. Thurber & Co., of New York, at 20 cents per pound, delivered at the depot at Dundee, Ill. This is an excellent sale and speaks well for the producers who are some of the most progressive and successful honey producers of of America.

◆

☞ Mr. R. J. Bennett, of Glasgow, Scotland, the very efficient honorary secretary of the Caledonian Apiarian Society, is now on a visit to Syria, and intends to make a call on Mr. Frank Benton, in Palestine, before returning to Scotland. We expect he will kindly give our readers an account of his trip when he returns. We shall all be glad to hear anything of public interest concerning our fellow-conntryman in that far-off land of the rising sun.

◆

☞ Mr. W. J. Andrews, ex-President of the North American Bee-Keepers' Society, has just been re-elected Mayor of Columbia, Tenn. This is Mr. Andrews' third term as mayor of that city, and we congratulate him. He is very popular at home, as shown by the handsome majority given him.

☞ This year there is a very marked improvement in the style and artistic character of Christmas cards. These go into thousands of homes, every year, and should be a means of elevating, if possible, the innate love for that which is beautiful in art. The bees love to visit and revel in the beautiful bloom provided so lavishly by nature, and bee-keepers should all aspire to be lovers of the beautiful, both in nature and art. This leads us to say that we have received some very beautiful samples of these cards for Christmas from L. Prang & Co., Boston, Mass., which excel anything we ever have seen before.

◆

☞ Mr. D. Higbee, Avoca, Iowa, after saying that he could not get along without the BEE JOURNAL, says: "By following its instructions this year, from 5 colonies, spring count, I obtained over 800 pounds of comb honey, the most of which I have already sold at 25 cents per lb., thus giving me $200, or $40 per colony (spring count) besides an increase of 12 colonies; in all now 17, to go into winter quarters." Mr. Higby is a progressive apiarist and has done very well.

◆

☞ On account of resuming the publication of the Monthly BEE JOURNAL for next year, we have found it necessary to adopt a new scale of charges for large advertisements or those that are to be inserted for a long time. We have, therefore, prepared a Table which gives liberal rates on advertisements by the inch in depth of column, when inserted in the Weekly as well as the Monthly editions. We feel sure that it will pay advertisers to employ both papers, and thus reach the many new subscribers that are now coming in for the new Monthly for next year.

The Ignorance of the Past Ages.

Mr. Thomas Balcomb, Luling, Texas, has sent us the following letter, and article on bees: "I have enclosed an article on bees taken from the *British Agriculture* of 1860. How strange it all reads to an advanced apiarist of the present day!" We will publish it as a relic of ignorance and superstition. It is as follows, and will amuse and interest as well as disgust our readers:

The word "Bee" is *beo*, Saxon—*bi*, Swedish—*bye*, Danish—*biene*, German—*byan*, Anglo-Saxon, to build—a name applied to an insect animal, of which the body has the appearance of being composed of circles or rings, and being cut into divisions by "incisuræ." An insect, *insecta*, Latin, being cut into segments, is an invertebral animal, without bones, breathing through lateral spinacles, and furnished with articulated extremities and movable antennæ. The bee is the "Apis" of scientific language, from *a*, by, and *pes*, a foot, as the animals cling or are suspended by the feet—from Greek word, as they are born without feet; *apio*, Latin, to collect; or from Greek for the sting of poison; and placed in the order "*Insecta hymenoptera*," from the Greek word for a membrane and a wing, as having four membranaceous wings, and a sting in the tail, which instil poison and pierce other bodies, as leaves and fruit, in which to deposit their eggs.

The species of the order are very numerous, of which the Domestic or Honey Bee, the "*Apis mellifica*," is the type. The insect has the mouth furnished with two jaws, and a proboscis folded in a double sheath—four wings, of which the foremost cover the hind ones when at rest—with the sting in the tail of the female and working bees. The animals are found in many countries in a great abundance, and attracted the earliest notice of recorded antiquity, and the nature and economy of the insect has employed much attention in the natural world. Congregations of many thousands form a society under the despotism of a queen, and the kinds are three—in males or drones, females, and neuters, without sex. The employment is most busy, hence the "busy bee" in extracting the honey or sweet juice of plants and flowers by piercing with the proboscis into the growing body, and conveying the honey into the bag within the body of the bee. Three vegetable substances are thence prepared—honey, pollen, or bee-bread, and wax—the first is deposited in combs or cells in store for food, the second, mixed with honey, feeds the larvæ or young, and wax is excreted by the bee for the purpose of constructing the cells. The pollen is extracted from the anthers of flowers, and is carried on the outer surface of the hinder legs, on which a hairy concave or basket is formed for lading the matters. The wax is exuded at the time in building the cells. The nest is built in hollows of trees or suspended from a bough, and is constructed in the interior with cells or combs that have in all ages raised the wonder of the mathematician and the admiration of the architect. The form is hexagonal with angular bottoms—the dimensions are exactly the same in length, width, and height, with partitions equally exact. No compass is able to surmount the accuracy of the structure, which is cemented and joined with wax as the work proceeds. The cells are used in storing the honey and for rearing the young, as the females lay the eggs for the purpose of being hatched there. About twenty-four days elapse from the laying of the eggs till the animal emerges a perfect imago, or a winged bee. The three kinds of bees, (queens, males and females) are bred separately, and reared by the distinction.

The instinct of nature directs bees to separate into colonies when the number becomes inconveniently enlarged for one abode—the migration is called "swarming," by which a new family is formed under the government of a queen, who leads every departure and settlement. The cluster of bees attaches generally on a tree not very distant from the old abode, when the swarm is enticed into a hive, and carried for domestic use. Two or three swarms are generally cast off in a season, of which the first is always the strongest and most valuable in May.

Bees are domesticated for the purpose of producing honey and wax, both of which substances are manufactured by the animals from the juices of plants. Honey is a thick, viscous fluid substance—*hunig*, Saxon—*honig*, Dutch—*honeg-honay*, German—*mel*, Latin. The article is whitish or yellowish in color. Sweet to the taste, soluble in water and becoming vinous on fermentation, liquefying by a gentle heat, and of a fragrant smell. It was very early discovered to be a most delicious food, and has been used in all ages in various forms. It is a species of sugar, and of two varieties—liquid and crystallized, the two qualities being always mixed. Honey is composed of sugar, mucilage, and an acid, which are separated by melting, and the cooling deposits the crystals of sugar. The use of honey is not so great as formerly, but still retained in medicine, and for domestic purposes as an article of provision.

Domesticated bees are lodged in hives 12 inches in diameter and of the same height, made of rolls of straw plaited together with shrubby fibres, circular in shape, flat on the bottom, and with a dome roof. The bottom is placed on a board a little wider than the hive, fronting the south and west, as bees like warm temperature. A small square opening cut in front of the hive and on the platform, affords an entry to the animals, 3 inches long and ¼-inch high, with a little shelf in front on which the bees alight. The position of a hive may be on the low end of a garden, as laden bees like to descend, and have an open view by which the animals rise in the morning. The door of the hive is closed in November, and the animals are torpid during winter: the hives are thatched, and the opening for work happens by the beginning of May. In October, the honey is taken by suffocating the bees with fumes of sulphur over a hole in the ground, into which the bees fall from the comb and are buried—a cruel practice, as may be said, but yet retained, and not more cruel than the killing of other animals to procure flesh for food. Bees are preserved in life, and the honey, or part of it, obtained by several methods—but the animals seldom thrive, and the remaining honey is lost. The loss of the animals is compensated by the great increase by breeding, which would soon overstock the country—the old is still retained. The honey is squeezed from the combs—8 to 10 lbs. from a hive, and best from the top swarms, or the first casting of the spring—or it may remain in the combs, which are cut into portions for use. The drained honey is preserved in pots and for medicinal purposes and confectionery.

Wax, *wex*, Saxon—*wacks*, German—*wax*, Swedish—*viscum*, Latin—is a thick, viscid, tenacious substance, excreted for the purpose of building the cells, and at the time when required, and from any food as well as from flowers and plants. The honey being drained from the combs, the waxy structure remains to afford the article, which is purified into the manufacture of several purposes, two pounds of wax being got from a good hive of bees. The color is a lively yellow, smell like to that of honey, tough when new, brittle when old, becomes hard and loses the smell and fine color. Wax resembles resin, having a different oil: contains—

Oxygen	5.544
Hydrogen	12.672
Carbon	81.784
	100.000

Both wax and honey are articles of a very large use, and are correspondingly estimated.

The economy of bees forms a subject of great curiosity and delight. The government by a queen has shown the constitution of monarchies, and the attachment to the single choice exhibits the regard of subjects to their superiors. The flights of the animals with a number in front of the queen, with a larger portion forming the rear, has exhibited the modern processions of dignity, with trumpeters and outriders in the van, a central or body guard, and promiscuous multitude bringing up the rear. The materials and structure of the cells form an unceasing admiration, in the shape and correct dimensions, the unerring similarity, and the very thin and delicate partitions. The active life in procuring and storing food for the whole family, exhibits a lesson of care and providence of universal application to all observation and to every thoughtfulness. The smallness of the animal and the natural provisions of the body add very much to the curious investigation, and the wonderful and most useful products of its labor are a great recommendation to the subject. The injury said to be done by boring flowers and puncturing fruits is very trifling, if any, and it may be safely affirmed that no provision of a country residence is more pleasant or more profitable than a hive, or several lodgings of bees, exhibiting a most splendid specimen of useful activity, and with a most striking portraiture of Nature in the minute creations of her plastic handiwork. If the scale be minute, the grandeur appears in the arrangement and detail, to be equally admired with the Alps or the elephant. Small objects excite wonder, as the larger create admiration.

☞ In this number we enclose a blank, to be used in sending on subscriptions for 1883. Very many run out with the present year, and by renewing *at once*, it will save us much labor in taking the names in type from the subscription list, and then, that of returning them a few days after. We hope all, who can, will send on their renewals immediately and save any errors that might occur during the rush at the end of this month, in the holidays. May we ask you, reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

☞ When changing a postoffice address, mention the *old* as well as the new address.

A Religious Newspaper.—We desire to call the attention of our readers to one of the largest, ablest and most popular religious newspapers published—one that secures the best writers in this country and Europe, regardless of expense; has the best and fullest book reviews of any paper in the country; has able articles upon financial and commercial subjects; has departments edited by specialists and devoted to Fine Arts, Music, Science, Religious Intelligence, Missions, School and College, News of the Week, Hymn Notes, the Sunday-school, Legal and Sanitary questions, Biblical Research (something that cannot be found in any other newspaper in the United States), Farm and Garden, Insurance, Weekly Market Reports, etc.—in fact, a newspaper which, with its twenty-two distinct departments, is suited to the requirements of every family, containing a fund of information which cannot be had in any other shape, and having a wide circulation all over the country and in Europe. We refer to THE INDEPENDENT, of New York, now called "The largest, the ablest, the best." See advertisement, in another column, and send a postal card for free specimen copy.

National Agricultural Convention.—The National Agricultural Convention, to be held at the Grand Pacific Hotel, Chicago, will begin Tuesday, December 12, and continue four days. The attendance promises to be large, and representative of all sections of the United States and all branches of agriculture. We are assured that the addresses, lectures and papers will be by the highest authorities in agriculture and practical affairs. There will be discussions on stock breeding, ensilage—the new system of preserving green fodder, which is attracting so much attention in the Eastern States, the tariff and other questions.

All interested in agriculture and its advancement are cordially invited to attend the convention and participate in its proceedings.

Joseph H. Reall is the Secretary, and may be addressed at 142 Dearborn street, Chicago, and *World* building, New York, for railroad rates, etc.

A Conundrum.—In the *Bee-Keepers' Magazine* for December, Mr. King asked us to explain why the quotation he gives in the *Magazine* does not agree with those we give in the BEE JOURNAL. We "give it up—ask us something easier." We have no means of knowing the methods employed by Mr. King in the management of the *Magazine*. We only know that we obtain the printed "Prices Current" of the New York market from Mr. Quinby every week, and quote from it *verbatim*. The *Magazine* only gives a very brief summary, and may be imposed upon by by some clerk of the house, who may not be informed as to the correct quotations.

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal, ...	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 00..	2 60
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper........	2 60..	2 40
The 6 above-named papers.......	6 00..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly, 1881................	2 85..	2 75
Binder for Weekly for 1882	2 75..	2 50

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

☞ New subscribers for the Weekly BEE JOURNAL for 1883, can obtain all the rest of the numbers for this year by sending $2 to this office.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

What Bees Accomplish.—A writer in *Good Words*, remarks as follows:

By far the most serious difficulty in the process of honey-collecting by bees arises from the extremely minute quantity of nectar which each flower yields, and from its being dilute—in some cases so poor in saccharine matter that its sweetness is not appreciable to the tongue. The strength of the sugary fluid varies in different flowers, and even in the flower at different times. Consequently the most direct way of estimating the yield of honey is to ascertain the actual quantity of sugar in each flower. This can be easily be done by chemical methods. If we take a large number of flowers, wash out their nectar, and determine the sugar in the solution, we can calculate from the number of flowers used the average amount of sugar in each flower with the greatest precision.

Experiments conducted in this way showed each flower of the fuchsia to contain little more than the tenth part of a grain of sugar. In monk's-hood the amount was rather less than the tenth of a grain, while in the everlasting pea it was found to be three-twentieths of a grain for each flower. In smaller flowers the quantity is proportionately less. Thus each flower of the little naturalized American water-blank only contains six-hundredths of a grain, and in those minute flowers which grow together in compact masses the amount was still smaller. A raceme, consisting of 20 flowers of the vetch, only yielded five-hundredths of a grain, or a little more than one five-hundredth for each floret. One head of common red clover gave a little over one-tenth of a grain (exactly .1224). Now each head of clover contains about sixty distinct flower tubes, each of which must therefore have a portion of sugar not exceeding the one five-hundredth part of a grain. The proboscis of the bee must consequently be inserted into 500 clover tubes before one grain of sugar can be obtained. There are 7,000 grains in a pound, so that for every pound of sugar procured in this way 3,500,000 flower tubes must be emptied. Honey, however, only contains ¾ of its weight of dry sugar; so that every pound of honey is equivalent to more than 2,500,000 clover tubes sucked by bees!

This shows what an amazing amount of labor they must perform. Their industry would appear to be indispensable to their existence. These amounts also reveal to what an extent the visitation of flowers must go on in the insect world, and help us to understand how it is that flowers are so dependent on insects for fertilization, so that we can well believe the forms of flowers to have been determined in reference to the insects frequenting them, and that the colors of the petals may serve to attract insects by way of advertisement, as colored bills attract the eyes of busy men. This view of the use of color and odor in flowers may seem to smack too much of trade and commerce, nevertheless it is the view to which science now gives undivided support. We have been so long accustomed to look on the beauty of the floral world as if it were exclusively for man's gratification, that it is difficult for us to believe that the delicately perfumed and showy petals of the rose or lily should be primarily intended for the benefit of the plant possessing them. But it must be remembered that each organism lives for itself, has its own laws, and does not possess any organ which is exclusively for the advantage of another.

Curious Observations of an Early Writer.—We find the following in Capt. Wudrington's "Spain and the Spaniards" in 1843. We presume the writer referred to the "Keever" hive, in use about that time:

Bees abound in this district and increase to such an extent that they return an enormous profit to those who take the trouble to care for or look after them. The common hive is the hollow stem of the cork tree which is cut into suitable lengths, and is perhaps the best material in the world for the purpose; next to it, is the common straw hive used in England; both these substances have the same valuable qualities of being non-conductors of heat and cold.

They never had heard of such a thing, much less practice it, as killing bees, and were surprised when I mentioned such a custom.

I ascertained a very curious fact, in their economy, that is well worth attention. The Canon Cepres, so well known in the first Cortes, being shut up in the Convent of the Cartna at Seville, by order of King Ferdinand, by way of passing the time, applied himself to study the economy of bees, which he had followed up at Cozalla, and was so successful in his management that in a very short time he had a thousand colonies. When the civil war commenced circumstances caused their being neglected and dispersed, and some colonies, finding no holes or cavities to suit them, attached themselves to a beam in an outhouse, where they made their combs in a similar manner to that by which the tree wasp suspend their curious fabric from the branches.

They were so well satisfied with this novel situation that they never left it, nor swarmed, but kept adding successive combs until they nearly reached the ground, and hung from the point of suspension like a huge living stalactite. The owner never disturbed them, but had the lower combs cut off, as they were wanted, and the colony remained for a considerable period without their showing the least disposition to change it.

This is certainly rather important information for the managers of apiaries, and may serve to confirm the statements lately published on the practicability of inducing the bee to work downward.

The Labor of Obtaining Correct Statistics.—The editor of the *Bee-Keepers' Magazine* remarks as follows on this subject:

We realized the necessity for accurate statistics when writing the article on bee-keeping for Appleton's *Encyclopedia*, and later in the preparation of an article on the same subject for one of the late supplemental volumes of the *Encyclopedia Britannica*. We spent more time and hard labor in collecting, culling and *averaging* in order to fairly approximate the true amount of the honey and beeswax production of the United States, both collectively and in geographical groups, than was required for any other three questions in the discussion of the whole subject.

We found that no reliance whatever could be placed on this class of statistics emanating from the Department at Washington, and this on the testimony of Gen. LeDuc, at one time Commissioner of Agriculture. We found that the annual amount of beeswax exported presupposed the collection of more than a hundred million pounds of honey to produce it. We made various calculations from many different standpoints, and, as a result, we concluded that from 150 to 200,000,000 pounds of honey could not vary far from the actual production. Such information as has been furnished by the Department hitherto, has only served to belittle the profession, hence the urgent necessity of some plan which shall give accurately the facts, and so enable beginners to enter on the business understandingly.

Feeding Bees.—A writer in the Germantown *Telegraph* gives his method of feeding bees in winter, as follows:

In the first place let me say that I would prepare the feed in the shape of a syrup, thus: Take of pure, clean water two pounds to four pounds of sugar; A coffee or extra C is best. Bring the water to a boiling heat and then add the sugar; stir well until it again boils and skim off all impurities; then let it cool and fill up glass tumblers and tie cotton cloth over each, and turn them upside down over holes in the top of the hives, if of the old-fashioned box or gum log, and you will have the satisfaction of seeing the tumblers soon emptied and stored in the brood combs. If you are using a good movable frame hive you can feed your syrup in the top of it in the following way: Take some old bits of combs and lay in the surplus chambers, and pour the syrup over them, and the bees will take it all down. Feed as fast as they empty the glasses or combs referred to. We should always feed all weak stocks late of an evening, which will prevent robbing in a great degree. If you use the glass tumblers to feed from, would recommend boxes to be turned over them so as to keep robber bees out.

Follow Some Well-Digested Plan.—The *Indiana Farmer* makes the following very sensible observations on the above subject:

Work with the bees, for the year 1882 is now done. Are we all satisfied with the result taking everything into consideration? Have we learned by mistakes made? Will we profit by them in the future? Will we learn wisdom by the mistakes of others, or must we continue going over the same ground to pay the penalty of experience? These questions, in the abstract, were called to mind by a letter from a correspondent now before us. Early last season he wrote us, asking some general questions of guidance for the season's work, stating at the time that he had some knowledge of the business, but knew that we were successful and wanted simply a general outline of work. He had then 10 colonies. We gave the required information as best we could, warning him of pitfalls in the line of some experimental suggestions which he contemplated.

Our general directions were to build up the colonies as fast as possible, strengthening the weaker ones from the strong when it could be done without injury to the latter, allowing each colony to swarm once; putting on and removing sections, removing queen-cells to prevent afterswarms, natural increase, building up nuclei, etc.

Now he says: "I wish I could in some manner convince our many bee-keeping friends, especially beginners, of the folly of trying to follow the many theories advanced by Tom, Dick and Harry, as to bee-keeping. I am a little ashamed to confess my failures, but in the hope it may be of benefit to some one, I will make a partial confession. I was not entirely satisfied with the directions you gave me. I concluded to work 4 colonies with your plan, the other 6 according to my own notions, with the hope that I would make a better showing in the fall and be able to tell you so. The 4 colonies each swarmed once, and gave me 30 pounds each of nice section honey, with from 10 to 20 each in unfinished sections, each first swarm filled their hives with comb and made some 60 pounds of honey altogether. Two of them swarmed again in August, I gave these six frames each, taken from the other colonies. So I have from the 4, 10 colonies in good condition, and about 210 pounds of honey.

My letter is already much too long to tell you of the mistakes I made with the other 6 colonies. Suffice it to say, I shall in the future work all my colonies on a plan similar to the one you gave me and shall experiment with one or two selected for that purpose only. My earnest advice to all beginners is to follow some well known plan of work until they become well enough versed in the business to have one of their own."

CORRESPONDENCE

A Charge to the Bees.

EDITH M. THOMAS.

Go forth, O bees, at blush of prime,
Go forth, O bees, and waste no time;
Into the jeweled chalice climb
Of every bloom that opens fresh this hour;
And be ye sure ye find the clover flower.

Oh, slight the violet, if ye will,
And slight the green gold daffodil,
And hyacinth, made sweeter still
By soft caressings of the midnight shower;
But see ye pass not by the clover flower.

I could forgive ye, that ye missed
The lilac tubes of amethyst,
Lillies, that heaven's breath has kissed,
And all the sweets in wildwood Flora's bower;
But see ye pass not by the clover flower.

O bees, though ye were now released
To search the gardens of the East,
I'll call ye home amidst your feast;
I charge you bring me honey for my dower,
Bring me the honey of the clover flower.

* * *

For the American Bee Journal.

The "Coming Bee," for Business.

JAMES HEDDON.

On pages 742 and 743 of the Weekly BEE JOURNAL we find two articles upon the above subject. The object sought is a grand one, and one to which no man can take any exception.

I wish, however, to discuss the methods persued. Mr. Briggs has not enlarged enough upon the plan he operated upon last season, to convince me that it amounted to much. I feel quite confident that the best queen breeders of the country will not respond to his call. If a popular vote could now be taken as to *who* our best queen breeders are, I would be willing to wager a prize on the best judgment, that not one of such breeders would send a queen. I fancy that I can see good reasons for not doing so. I believe those judicious enough to produce the best strains, would not be *in*-judicious enough to send Mr. B. their choicest queens for $2.50, with one chance in 5, 10, or 20 of drawing a prize of $25. Many are averse to lotteries, and many know that a verdict of any one man, or committee of men, regarding the best out of 5, 10, or 20 queens never seen before, would decide about as meritoriously as the decision obtained by the casting of dice. They know that after all, the future use of the bees reared from these queens, their use by the honey producers of the country at large will be the final and only satisfactory test, and almost surely reverse the decision of the most worthy committee that could be selected.

Queen breeders, knowing that they have a valuable strain of bees, will not be very fast to deliver the best of it over into the hands of another breeder. My own opinion is, that, down in the bottom of their understanding, most of the queen breeders feel that, as I have just said, the selection of prize queens will be a "happen-so" affair, and should it turn against them, (and chance will leave them out as many times to one as there are queens entered,) some novice purchasers would turn their patronage from them.

Fine wool sheep, Jersey cattle, or any fixed type of best stock, might be thus judged upon with some degree of accuracy, but as we have no fixed type of the "coming," or "best bees for business," no such course of action will prove any thing, or get any nearer to the best bees than we now are.

If Mr. Briggs *could* by this unprecedented method call out the best queens from the best strains now extant, he would then have a good groundwork upon which to commence breeding up a strain worthy to compete for the title of *Apis Americana*, or "best bee," and when he had devoted five years more to the pruning and testing of this strain, I would like a queen from his apiary. But as no queen breeder can progress with his work toward the "best bee," and send out his choicest from his selected queens, Mr. B. cannot expect to commence where the prize breeder leaves off. Speaking for myself I now have a few queens in my apiary that $27.50 each, could not buy. I feel thus sure of the cause of what success I do meet with. To sell them at that price would be a loss in dollars and cents, to say nothing of discomfiture.

I think Mr. Briggs, like Mr. Shuck, as stated on the same page, is breeding for too many points at the same time. All he wants is the most honey with the least capital, labor, and discomfiture. It is my opinion that he who leaves out the brown bee, thus breeding for yellow bands, will get away behind in the race. Read the following points of excellence given the German bees over the Italians, by L. L. Langstroth: "They commence to breed earlier in the season, build the straightest and most worker comb, work more readily in surplus boxes; they make the whitest comb honey, less inclined to swarm, more sensibly affected by loss of queen."

Prof. Cook credits them with being more hardy and likely to survive our most trying winters.

I wish to add that these black or German bees being so different in their nature and disposition from the Italians, have many other minor points of advantage to the master, which, though small, all play a large part in the success and comfort of a season's experience. I will mention a few: they alight sooner when swarming, which often saves a mixing of swarms and its consequent troubles; they also hive more readily, each one seeming to be determined to get in first; they drive up into the forcing box in less than half the time (queen and all), when making swarms artificially; they mind the admonitions of the smoker much more readily than do the Italians, etc.

Now I am not pleading for Germans *vs.* Italians, but I do insist on retaining some of their valuable superiorities, possessed also by the brown German bee, by adding this cross to the "Coming Bee."

Mr. Shuck's tabulated report, proves beyond a doubt, a good season. Whatever there may be of good bees, good management, or good anything else, we *know* there was a good season. Now, as there is no comparison made between Mr. Shuck's strain and any other, we have no evidence that the large yield of honey reported, is at all due to his strain of bees. If such is a fair inference, then their "pitiable honeyless" condition about June first, is the same evidence of a worthless strain.

Mr. Shuck says, "Mr. Heddon and Mr. Doolittle both claim to have superior strains of bees, yet they both complain more or less of the frequent occurrence of inferior queens.

Then he goes on with a report of his honey shower. Now, are we to infer that Mr. Shuck never finds any inferior queens? I can not speak for Mr. Doolittle's; all I can say is that if I found "fifty or sixty inferior queens;" judged by a reasonable standard of superiority, I should think that something unusual had happened to my bees. But, passing through the crucible of my standard, I find from none to 3 or 5 worthless queens each spring, and I supersede many more, not "worthless," but from various ways not coming up to a certain standard of excellence that I have fixed in my mind and in the better part of my apiary. Of course, this standard moves as fast as the improvement of my apiary moves forward and upward.

If Mr. Shuck has a strain of bees so nearly perfect, that they have no inferior queens, a supersedure of which is not labor well spent, then he is ahead of my imagination. I never expect to reach such a point of excellence. I know what these honey showers are. I have had a larger yield, the apiary through, than that reported by Mr. Shuck. I had one colony, that same season, which gave more than twice the surplus obtained by his best colony, and at the same time my bees were nearly all of the German variety. I never expect to realize as great a difference in results from different colonies, different management, different strains or races of bees, as from different seasons.

In my next I will have something to say about some of the methods and implements used in breeding for better bees.

Dowagiac, Mich., Nov. 26, 1882.

* * *

For the American Bee Journal.

Comb vs. Extracted Honey.

W. H. BUSSEY.

I have been much interested in the discussions at the different conventions this fall, reports of which have been given in the BEE JOURNAL. There seems to be no definite conclusion as to the exact comparative cost of the production of comb and extracted honey, and if, by means of these few lines, I can get it definitely settled, I shall feel well repaid.

I notice that Mr. Jones, *et al.*, at the National Convention, stated that they could produce from two to five times as much extracted as of comb honey, and also that they could make $5 on extracted to $1.00 on comb honey.

Now, while I do not wish to contradict these statements, it seems to me that it should not be so. Taking the reports of the National and the Northwestern Conventions, together or separately, they do not show it; yet they ought to be considered a fair average. It does not seem reasonable to me and I will try to give some of my reasons for thinking differently. The profits are what we are after.

Take, for illustration, the report of Messrs. Oatman & Son, who obtained 26,000 lbs. of honey in the comb from 229 colonies, with an increase of about 50 per cent. I understand that they disposed of their entire crop, at Dundee, for 20 cents per lb., net. No doubt it was a fine lot of honey, but even estimating it at Dr. Miller's figures, (page 706,) 16 cents *net* (which I think is cutting too much for expense, as will be seen further on), it is double the price that can be obtained for extracted in the best shape, and a slower sale. If we look at the market reports from week to week, we shall see the same thing.

Regarding the cost of production, I think it will be admitted by all that there is less work in obtaining comb honey than in getting extracted, with the difference in favor of the comb. The main part of the work for comb honey can be done in the winter and spring, while, with extracted honey, the work must be done in the heat of summer, when we are the busiest.

Now, let us see what the comb honey costs? Nothing but your labor! You sell the honey in sections for enough to pay for the sections themselves, the foundation, boxing, glassing, etc., etc. If you do not believe it weigh 1,000 sections and figure it up. With extracted honey you have to buy barrels, and then sell the honey, less the package, at half the price of comb honey.

I stated that the reports of the two conventions showed poorly for extracted honey. It will be seen, by referring to Dr. Miller's table, page 706, that the eight persons referred to as having such big results, the majority of them ran for comb honey.

We know that the field bees do not build the comb. If the colony is strong in young bees when your honey flow begins, I think there need be no fear that the foundation will get drawn out as fast as it will be needed, and by giving them plenty of sections, can we not obtain just as many pounds of comb as extracted honey? Of course, if we have only a small number of colonies and had built up a home trade, using tin pails and jelly cups, we could dispose of it to advantage, but I did not refer to that; I had reference to the wholesale trade only. Comb honey will sell itself, while we have to force the extracted. Therefore, I fail to see how we can make it pay like comb honey.

Cannot we get at the facts? We ought to know; a farmer ought to know what an acre produces, and what it has cost to produce it; just as much as a manufacturer knows what a certain piece of goods or machinery costs.

We ought to know what it costs to produce a queen; what it costs to produce a colony of bees; how much honey it takes; how much it costs to keep a colony through the season, and how much it costs to produce a pound of comb or extracted honey. I, for one, am anxious to know, and how much more (if any) of extracted honey can be produced under the same circumstances than of honey in the comb.

Chicago, Ill., Nov. 17, 1882.

* * *

For the American Bee Journal.

How I Introduce Queens.

G. M. DOOLITTLE.

Having been requested to describe my method of introducing queens, in the AMERICAN BEE JOURNAL, I will now try to do so. The reason why so many fail in introducing queens, is, in my opinion, because they are not careful enough in noting the behavior of the bees toward the queen given them. If only one or two bees are hostile toward a queen, I have found that the same are capable of turning the whole colony against her. If beginners were to fully learn that, so long as a single bee appeared hostile toward a queen, she should be kept caged, we should hear less of the loss of queens in introducing.

My method of introducing any queen I consider valuable, is this: I first make a cage from wire cloth, containing 14 to 16 meshes to the inch, by cutting a piece 4x6 inches square. I now cut from each corner a piece ¾ of an inch square, when the sides and ends are bent at right angles, so as to form a box, as it were, without a bottom, 2½x4½ inches square. Now take out the cross wires one-half the way down the sides and ends you have bent up, and you have the cage so that you can press it to the combs ⅜ of an inch wherever you choose.

In order to get the new queen introduced with the least trouble, I prefer not to remove the queen I wish to supersede, till I am ready to put the new one in her place. To be sure that the new queen cannot get away from me I take her to the house, open the cage she came in before a window and clip her wings, after which she is put into a round wire-cloth cage (the same as was formerly used in introducing), when we are ready to look for the queen to be superseded. To best find her, I commence to take frames out at the side of the hive, looking the first two over hastily, and putting them in an empty hive. As I take out the third, I look down the side of the fourth frame, as it hangs in the hive, for, if the queen should be on the side of that comb, she will start to go around to the opposite side of the frame as soon as the light strikes her, in which undertaking she is readily seen. If she is not there, I look on the side of the third frame opposite me, holding it so that the vision strikes it obliquely, as a queen is more readily seen by looking at her side than on her back. I keep on taking out frames until she is found, and rarely fail in finding one on trying the first time. If I do not succeed, I commence to place them back, looking at them in the same way, as I take them from the empty hive. The knowledge that a queen will always run from the side of the frame exposed to the light, upon opening a hive, saves much looking for the queen on the side of the frame next the operator.

Having found the queen, I look the combs over till I find one from which the young bees are hatching quite plentifully, and having some honey in it also. From this comb I shake all the bees, and then let the queen crawl from the round cage upon the comb. When she gets where I can place the cage over her, so as to enclose some honey and hatching brood within it, I do so, and press the points into the comb as far as unraveled, when the frame is put in the hive, leaving space enough between the frames, so that the bees can get around and over the cage.

In 24 hours I go and look at the cage. If the bees are thickly clustered over the cage, biting the wire cloth and showing signs of anger, I put it back and wait 24 hours more. So I keep on until not a single bee shows signs of trying to get into the cage to sting the queen; but all are spread evenly, standing on the cage as they do on the combs. When such is the case I carefully lift the cage from over the queen, letting her and the young bees, which have been hatched during her confinement, go where they please, keeping watch all the while to see that the bees treat her kindly. If they do, I put the comb in the hive; if not, she is caged again. In from one-half to one hour after liberating, I go and look at the queen again, and if she is now treated as their old queen was before removal, I shut the hive considering her safely introduced.

Right here I wish to say that I often release a queen in 12 hours and find that she is all right, and I rarely have to wait, about letting her out, more than 24 hours. Still, in extreme cases, I have been obliged to keep them caged nearly 10 days. Do not be afraid of the queen dying in the cage, for if placed over honey, as I have spoken of, she will live a month. The only trouble when left so long, is, that the bees may gnaw the comb away so as to get under the cage. If liable to do this, I shake all the bees off and move the cage to a different place.

On page 437 of the present volume of the AMERICAN BEE JOURNAL, Mr. G. W. Demaree says, "The queen will generally begin to lay in one or two days after she is accepted by the bees; and after she begins to lay, she is as safe as if she had been reared in the hive." This can be laid down as a rule, and I will say that one-half of the queens introduced by me by the above method are fed by the bees outside of the cage, and acknowledged as mistress by those hatching within the cage; hence eggs are laid in the cells from which the young bees have hatched. When I find these circumstances existing I remove the cage and close the hive without fear of the queen being disturbed.

I have used the above plan for nearly 3 years, and have not lost a single queen. If I wish to exchange queens in the yard, which are not valued very highly; or wish to give a queen from a nucleus to a queenless colony, I simply take the frame having the queen on, with all the adhering bees and put it in the center of the queenless colony. In this way I save much valuable time, both to me and the bees, and do not lose 1 queen in 20. But when a queen has come from a distance, or in case of a valuable queen, I know of no better way than the plan first given.

Borodino, N. Y.

For the American Bee Journal.

The Statistical Report for Maine.

J. A. MORTON, M. D.

DEAR EDITOR—I owe to the bee-keepers an apology for the imperfect and incomplete report of bees and honey for Maine, as given to the National Society. I did not have the blanks, or any definite instructions what to do; and I waited so long that I had scarcely any time to even do what I did. I may in a future communication give you some idea of the industry of the remaining 7 counties of the State. All or nearly all I gave was obtained by 2 days hard work at our State fair, and I was sick while there and just able to scribble off what I could before 5 a. m., Monday, Oct. 2d, and mail it at that hour, actually not having time to read it over after writing. So when you gave the slight notice in your next issue and punched us on the "old fogy 30 per cent. loss in wintering," I felt ashamed but when in a recent number you gave the full report, table and all, I felt better, but sorry I had not obtained the report for the whole 16 counties, and given a little more time and care to my report. I also thank you for its insertion,—and pledge my word, if I can have the necessary blanks and instructions, to do all I can for a full and correct report of every town in Maine, either in assisting our Vice President or on a sub-committee under your supervision. Cannot a postal card be ruled and printed with headings so as to give all needed information from bee men to the committee, also full instructions on a slip of paper printed and the card with slip of instructions mailed in unsealed envelope either from vice president or some other person appointed for the purpose, to at least one bee-man in each town, and he could collect the statistics, filling the blank cards and forward without any additional postage? This plan, if practicable, it seems to me, would involve the least expense to the society and *none* to each bee-man returning the postal cards. If one card is not enough use two, one in the spring and one in the fall. How does the idea strike you? These cards could have either your name and address or that of vice president or sub-committee of each State or county all printed ready to mail. Then if returned to the latter they could all be condensed on one card or on blanks and returned to headquarters. It seems to me this plan would be less expensive and more direct than that of Mr. Terrell.

I think more and more of the JOURNAL every week it comes. I shall be willing to pay something towards aiding in some plan to attain the desired end, in bee statistics.

J. A. MORTON.

Bethel, Maine, Nov. 22, 1882.

[Yes; if we can find at least one bee-man in every county who could and would get the desired information and send it to the State vice-president, and he to the committee, it would be a cheap plan. But, we fear, the *if* ruins the proposition. We shall see, however, and the future will determine. Dr. Miller is, we are informed, the chairman of the committee, and when the committee are called together and have a deliberation on the subject, the several plans suggested will have due consideration.

Since the above was in type, the following, from the Secretary of the State Association, has come to hand. Maine is setting an example to all the Vice Presidents of the National Society and Secretaries of State Associations, which we hope will be followed by those officers in every State in America:

Wishing to make out as full a report as possible of the number of colonies of bees owned, and honey, wax, etc., taken for the past year in the State of Maine; bee-keepers will confer a favor on the bee-keeping fraternity by filling out the following and sending the same to William Hoyt, Secretary of the Maine Bee-Keepers' Association, Ripley, Me.

1. Name.
2. P. O. Address.
3. Number of colonies owned October 1, 1881.
4. Number of colonies owned May 1, 1882.
5. Number of colonies owned October 1, 1882.
6. Number of colonies showing yellow bands.
7. Number of colonies of blacks.
8. Number of colonies sold during the year.
9. Number of colonies bought during the year.
10. Number of queens sold.
11. Number of queens bought.
12. Number of pounds of honey taken.
13. Number of pounds of wax taken.
14. Kind of hive used or preferred.
15. How and where wintered.

We hope that the matter of obtaining correct statistics will receive that attention due to such an important subject.—ED.]

From the Apiculturist.

The Cheap Queen Traffic.

G. W. DEMAREE.

I have taken no part heretofore in the discussion of the subject pertaining to the traffic in "cheap queens," because I have regarded much that has been said on the subject as a species of cheap advertisements. I have wondered at the patience of the proprietors whose columns have been filled with arguments, *pro* and *con*, as to whether or not it pays to rear queens at a certain price. It is not a matter of general interest to bee-keepers, as to whether or not queens can be reared for $1 at a profit. That is a matter which concerns the breeder alone. There is a phase of the cheap queen business, however, which does concern every intelligent bee-keeper, and that is as to whether or not the slipshod methods so commonly practised in queen-rearing and queen-bartering has been conducive to the best interests of bee-culture.

Although many have disposed of the subject in short order, by either condemning or approving of it, to my mind the subject is not so easily disposed of.

If we are willing to admit that bee-culture is yet in a "crude state," and are content for it to remain so for years to come, why, then, the tons of honey obtained and put upon the market of late years would indicate that the "cheap traffic in queens" has done wonders for bee-culture.

But there is another view of the subject. Many of us believe that if the breeders of queens had, all this time, been pursuing a more scientific course in selecting and breeding, with one eye to the very best stock that can be obtained, and had been less selfish and greedy, and more determined to send out none but the best queens, bee-culture would be far in advance of what it is to-day.

Most persons seem to be unable to perceive that there is quite a difference between the shoddy "dollar queen" business, and the legitimate business of rearing and selling either tested or untested queens to suit customers.

"Dollar queen" is a shoddy phrase, borrowed from the trashy dollar store business. It means about this: "I have many hundreds of articles to sell, they are worth from little or nothing up to one or two dollars, but these articles which are worth one or two dollars, are in comparison to those that are worth little or nothing, about as one is to a hundred. My customers must take them all, you can have any of them for a dollar, you may get a bargain."

You will see that the shoddy dollar queen business requires of you to buy with your eyes shut, and take anything that is "born alive." The wise man suggested that no man was weak enough to expect to capture a bird by laying the "snare in its sight," but it would appear that intelligent bipeds can be taken in in that way.

The generality of mankind have a weakness for "cheap goods," and there is nothing particularly strange or wrong about it; nevertheless, it works evil and that continually. This false notion of "cheap traffic," is at the bottom of all shoddy business.

I have kept a small queen-rearing department to my apiary for several years past to supply my own apiary with choice stock and for experiment, and in this way I have gained quite an experience in queen-rearing. The breeder should make it an undeviating rule to reject at the start all queens which are abnormal in size, color or form. This I believe to be essential to scientific queen breeding. This rule will apply to the scientific breeding of all animals, but more particularly to queen breeding, because the queen is a creature of "development." Were I rearing queens for the market, I would pursue this course with fidelity, and would have no hesitation to sell such selected queens to suit customers, reducing the price when sold, before they were tested as to their mating.

That the reader may have a glimpse at the inside of the dollar queen business, I quote from the catalogue of one of our largest dealers in cheap as well as dear queens. And, by the way, a gentleman who is as square as a brick in his dealings, and hence has nothing to conceal as to his manner of doing business. Here it is, *verbatim et literatim*:

"DOLLAR QUEENS. — The dollar queens are always taken just as they come, and are *never culled*. Customers often ask us to pick out a large yellow one for them. My friends, who would then have the *small dark* ones? We can't do it for anybody, not even the Queen of England. If you want *us to pick*, you must buy *tested* ones." [Italics mine.]

The above speaks a whole volume for the "true inwardness" of the shoddy dollar queen business. The dollar queen man will not "pick" for anybody, not even the Queen of England, but he will pick for his dear, precious self, else where does he get those "large yellow" ones to sell as "tested ones." But, then, who will take the "small, dark ones," if it is known that the large yellow ones are sold at the same price? Echo answers, who?

It will be seen that by following the rules of scientific breeding, instead of the slip-shod dollar queen methods, the breeders will have no "small dark or otherwise abnormal queens for sale, and not resort to the wily tricks of "trade" to work off the trash.

Taking this view of the case, the difference between the lottery dollar queen business, and the business of careful breeding and selling each queen upon its own merits, is as wide as the heavens are above the earth.

Christiansburg, Ky.

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the BEE JOURNAL.

CONVENTION NOTES

Local Convention Directory.

1882. *Time and Place of Meeting.*

Dec. 6-7, Michigan State, at Kalamazoo.
T. F. Bingham, Sec., Abronia, Mich.

1883.

Jan. 9.—Cortland Union, at Cortland, N. Y.
M. C. Bean, Sec., McGrawville, N. Y.
9.—Ohio State, at Columbus, Ohio.
D. Spear, Sec., Cardington, Ohio.
11, Nebraska State, at Wahoo, Neb.
Geo. M. Hawley, Sec.
16.—Eastern N. Y., at Albany, N. Y.
E. Quakenbush, Sec., Barnerville, N. Y.
16-18, Northeastern, at Syracuse, N. Y.
G. W. House, Fayetteville, N. Y.
18, Champlain Valley, at Middleburg, Vt.
T. Brookins, Sec.
19, 20.—Mahoning Valley, at Berlin Centre, O.
L. Carson, Pres.
Feb. 3.—Northern Ohio, at Norwalk, O.
8.—Maine State, at Dexter.
Wm. Hoyt, Sec.
April 5.—Utah, at Salt Lake City.
E. Stevenson, Sec.
May 11.—Iowa Central, at Winterset.
J. E. Pryor, Sec.
—, —Texas State Convention, at McKinney.
Dr. W. R. Howard, Sec.
Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Oregon Convention.

Quite a number of persons interested in bee culture attended the preliminary meeting at Williamette, on October 25.

An organization was effected, constitution and by-laws adopted, and the following officers elected for the ensuing year: Dr. J. W. Morris, President; A. Warner, Vice-President; E. E. Charman, Secretary; A. F. Miller, Treasurer; J. D. Rusk of Clackamus, M. V. Ensley of Yamhill, and T. L. Riggs of Multnomah, were chosen as an Executive Committee.

The first annual meeting of the newly-formed society will be held November 22, 1882, at 10 o'clock, at Oregon City.—*Williamette Farmer.*

Southern Cal. District Convention.

The following report is gleaned from the *Apiculturist*, but we cannot find out where the Convention was held—we presume it was at Los Angeles, but the report does not state. It was held on Oct. 19.

The subject of shipping honey, the most suitable package for the different markets, and the crop of Southern California, was fully discussed by those present. The subject of the different races of bees was then brought up. Mr. Harbinson though that the Holy Land bees were very good, but preferred a cross between them and the Italians to either race in its purity, and that the Holy Land bees were very uneasy when there was no honey to be obtained from natural sources, consequently they were more apt to rob and were not a very good bee for a poor year.

At half-past one the meeting was opened with President Pleasants in the chair. The books were then open for the reception of new members. The following joined the Association: D. S. Given, Los Angeles; M. H. Mendelson, Newhall; A. W. Osburn, Los Angeles, and M. F. Ritchie, of Florence, Los Angeles county, was elected an honorary member.

The President read his address. Mr. Levering moved that a vote of thanks be tendered the President for his able address, and that it be placed on file with the Secretary. Carried.

The election of officers being next in order, Mr. Levering moved that the same officers be re-elected. Carried.

A paper on different subjects was read by Mr. Harbinson, for which he received a vote of thanks from the association. He referred to the importance of taking steps at once to memorialize Congress to pass a law similar to the timber law, whereby the settler may acquire a title to government land by planting a specified number of acres of the same in bee feed-trees, flowers, etc. Such an act, if it could be secured, would be very applicable to the rough mountain lands, and would insure the occupation of them, whereas they might never be settled and remain barren mountains as they now are. The passage of such a law would cause the barren wastes to bloom as an Eden and flow with sweetness as a Canaan. Apiculture would soon become more reliable and assume a more important position among the industries of the country.

It was moved by Mr. Levering that Mr. Harbinson be appointed a committee of one to draft a memorial embodying the main object of this paper. Carried.

A communication was received from Mr. S. N. Wickoff and read by the secretary, for which he (Mr. Wickoff) received a vote of thanks, and it was ordered placed on file.

A report of San Diego county was then handed in by Mr. Harbinson, and was as follows: 4,680 cases comb honey, net, 262,080 lbs.; extracted honey, 226,000 lbs.; value of honey, $46,139.60; value of wax, $3,860.40; total value, $50,000.00.

The report of the committee on the protection of bees against foul brood was received, and the committee discharged. The committee on new constitution and by-laws reported that they had never met; they were given till the next annual meeting to report.

The subject of foul brood was then taken up and discussed by those present; each one giving his experience and belief as to its origin.

There being no further business, the meeting adjourned to meet during Fair week, 1883.

☞ The annual meeting of the Cortland Union Bee-keepers' Association will be held in Cortland, N. Y., on Tuesday, Jan. 9, 1883.

M. C. BEAN, *Sec.*
McGrawville, N. Y.

Read before the N. A. B. K. S.

Courtesy in Journalism.

A. I. ROOT.

I should never have chosen such a subject had not Professor Cook kindly asked me to take it; or, rather suggested it, as it were. In the first place, I do not feel sure that my experience in journalism would warrant my taking such a subject; and then again, I am not sure that my ideas might not be called queer and singular, by some.

As this is a bee convention, I presume the kind of journalism I am expected to speak of is bee journalism, if I am to be allowed the term; and as we now have a half dozen or more bee periodicals published in our own country, and about as many more in other countries, it very likely behooves us to consider well this very matter of courtesy in journalism. Are the editors and the writers for the bee periodicals more uncourteous to each other than those of other class journals? I trust not, although I think it *has* been said, that all bee-men, so long accustomed to stinging ways, sometimes go so far as to think that stinging things in print are right and proper.

A manager of a theater once said, by way of excusing himself for some things in the play, that theaters are just what the public demand they should be, thus throwing the blame all on his patrons. Editors of bee periodicals might doubtless say, that their journals are edited in such a way as to please the wants and wishes of the greater number of their subscribers. There may be truth in this, and it would be a very convenient way for us who have the periodicals in charge, to throw all blame for what want of courtesy there may have been in our respective publications on to the shoulders of our patrons and contributors. It might be very convenient, but it would not be right. At the same time that we strive to please those who give us their support, it is our duty to strive to elevate and ennoble. It is every teacher's duty to do this; and what teacher should be more careful than the editor? These papers go into our homes, and it is to be hoped they are read by our children. We all know it will not do to give our children all they ask for. As we are all but children of a larger growth, the same rule will apply to most of us, I believe. It is not always well or wise to give us all we ask for.

All bodies are in the habit, usually, of choosing some one from among their number to look after their best interests. We have teachers for our youth, pastors of our churches for grown-up children, and our papers and magazines for the people at large. Perhaps these latter are primarily for the purpose of keeping us informed of the events of the times; but at the same time they must exercise a powerful influence over the morals of the people before whom they speak. What, then, should be the character of these leaders and teachers? If it is a fact, that our papers are to a great extent what we, as a people, demand of those who publish them, what is our duty as a people in the matter? Your pastor is very glad indeed to have you take him by the hand and tell him that his sermons have been helpful to you, and your doing so helps him, perhaps more than you imagine, to preach better sermons. So every editor is glad to hear from those whom his words reach; and not only is he glad of words of commendation, but those of kind criticism. In fact, he is often led to do things he would never think of doing, because some one suggested it. Of course, these suggestions are not always wise, and, on this account, an editor needs more than ordinary wisdom and discrimination.

I need hardly say that those who wield the power of the press should be free from and entirely above, if it were possible, all feelings of prejudice, spite or jealousy. The wants and needs and rights of his readers should be all equally dear to him. The peculiarities and, perhaps, weaknesses of each member of his large family should be held sacred and touched upon with the greatest gentleness; and he, above all others, should have a wide charity.

Think gently of the erring;
Ye may not know the power
With which the dark temptation came
In some unguarded hour.

Whatever appears in print is a public matter. It is more public than any thing that can be said in any public meeting, because it stands there to be read of all men—ay, and women and children too. When we have visitors at our homes we are very careful to be courteous to them, and we are on our best behavior as it were; for who would think of indulging in little spites, or unkind words, before company? I fear we sometimes forget that whatever is printed is before a very large company. Few can realize how it cuts and smarts to be held up in derision in public print, who have not passed through it. It may be urged that this dread of being published is a most powerful restraint to one who is strongly tempted to do wrong, and I grant this, and would by all means advise warning the public when the matter is something demanding that they should be warned. I think we all agree in this; but at the same time I believe in putting it mildly, and using a few kind words instead of harsh, to do the most good.

There is one kind of temptation into which we may all of us be drawn, that I would speak of. Sooner or later somebody will "come down" on you a little roughly, and perhaps a trifle unjustly, or what amounts to the same thing, you may, if you are of the proper temperament, *imagine* some one has publicly insulted you, when such is really not the case. In either instance, what should a real live man do, when publicly and falsely accused? In a great many cases I would say, do nothing at all. One reason for giving this advice would be, because if you say anything you will say too much. While it is bad for a contributor to fill a column or more in endeavoring to set himself right before the people, it is still worse for the editor to use space in this way.

Years ago some one accused me unjustly, through one of the bee papers. I have forgotten now what it was about, and who it was that wrote it. I thank God I have forgotten, dear friends; for if I should meet the man here to-day who wrote it, I could shake hands with him pleasantly, without even remembering it was he who wronged me. Well, I was so badly stirred up I could hardly write without trembling. I would write only just a few words to set myself right. Those few should be right to the point. I wrote and wrote and wrote, and still there was just one more very important point that you all ought to know in the case. I had neglected my work an hour or more; and when I looked at the long manuscript, I had a sort of misgiving that there ought not to be any occasion for any such a long rigmarole, no matter how much I had been abused. At this crisis our pastor happened to come in, and I laid the matter before him in a general way. "Brother R.," said I, "is it not a fact, that there is something wrong, whenever it becomes necessary for us to use that amount of space in self-defense?" and I held up the long manuscript. His assent was more in his kind look than the words: "Yes, my friend, there is something wrong when so much needs to be said, or seems to need to be said, on either side." Down it went into the waste basket, and you can hardly tell how thankful I am that it did go there. The controversy stopped at the beginning. I do not think I ever suffered much in the estimation of any one, for people judge more by the life a man lives right along year after year than by what somebody says about him, even if it is said in print.

Do you ask, then, what harm these unjust attacks do in a paper? My friend, it harms the one who writes them; it harms the editor who gives place to it, and it harms those who read. If every word of it be true, and it be written in an unkind and unchristianlike spirit, it harms the guilty party, for it makes him harder and more wicked. As quarrels are contagious, and in one sense fascinating to the young,—are you aware, friends, that a dog-fight has its fascinations?—well, our children, growing up at your house and my house enter into the spirit of these controversies, and get to thinking it is the way to do business, to fight it out in words in this way, both parties get stirred up, and fearfully exaggerate without meaning to, or, in fact, without knowing they have done so, and on and on it goes, and, it may be, ending in lawsuits, and years of quarrels. Did you never observe, that when a man has a quarrel or controversy with one person, he is pretty sure to have another very soon with somebody else? He has got mentally sick, as it were; and the worst part of it is, he does not know he is sick.

It is not alone we, who are comparatively without talent, and a high order of education, that are guilty of a want of courtesy through the papers; but it sometimes happens that ministers of the gospel, and professors in our schools and colleges, seem to forget, or be sorely tempted, at least, and to have faith in a war of words, rather than to have faith in the teachings of our Savior when he said, "Do good to those that hate you."

A very good friend of mine was once shamefully abused by one who, like himself, stood prominently before the people. The injured one sat down at his desk and took the article, point by point, and paid him back in his own coin, driving him into corners he could never get out of, and he did it so nicely, and with such skill, he could not resist the temptation of carrying the paper home to his wife, to let her see how cleverly he had done it. To his surprise, she did not commend him for his wisdom and skill in making his clever hits, but, on the contrary, declared he must, under no circumstances, think of having it go into print. Like a good husband, he yielded to his wife's superior wisdom, and and wrote so kind a reply that his opponent was ashamed of himself, and the two are, I trust, to-day on a friendly footing, even though their lifework both lies in the same department of natural science. I believe if these things were shown to our wives, oftener than they are, it would be a better world than it is. I presume we cannot all of us be always quiet and cool under all provocations; but I feel sure we can, if we try hard, let nothing ever go into *print*, over our own signatures, but what is kind and gentle, even though it be written to and of the unthankful. "He that ruleth his spirit, is greater than he that taketh a city."

Medina, Ohio.

☞ The 17th annual convention of the Michigan State Bee-Keepers' Association will be held in Kalamazoo, Dec. 6 and 7, 1882. All interested are cordially invited to participate in the discussions—which will embrace the live issues of the Apiculture of to-day. Thomas G. Newman, A. I. Root, D. A. Jones, Prof. A. J. Cook, and many other distinguished apiculturists are expected to be present. Low rates of board at hotels have been secured.

T. F. BINGHAM, *Sec.*
Abronia, Mich.

☞ The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning Co., O., in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th. L. CARSON, *Pres.*

☞ The annual meeting of the Champlain Valley Bee-Keepers' Association will be held at Middleburg, Vt., on Thursday, January 18, 1883, at 10 a. m. T. BROOKINS, *Sec.*

☞ The Nebraska State Bee-Keepers' Association, will hold its annual session in Wahoo, Saunders county, Neb., commencing Thursday, Jan. 11th, 1883. Arrangements have been made with the railroads to secure 1¼ fare for the round trip. The Saunders county Bee-Keepers' Association will furnish entertainment free to all visiting apiarists. Bee-keepers from neighboring States will be welcomed.

T. L. VONDORN, *Pres.*
GEO. M. HAWLEY, *Sec.*

☞ The Ohio State Bee-Keepers' Association will meet in Columbus, in the rooms of the *Ohio State Journal*, on Tuesday and Wednesday, Jan. 9 and 10, 1883. A full attendance of members, and all interested in bee-culture, is requested, as matters of interest and importance will be discussed.

DR. H. BESSE, Delaware, O., *Pres.*
DANIEL SPEAR, Cardington, O., *Sec.*

SELECTIONS FROM OUR LETTER BOX

Swarming, Moving Bees, Etc.—Where I lived during the past summer (Warren Co., Iowa) we had a fair crop of honey. I commenced the season with 39 colonies of Italians, hybrid and black bees; and obtained an average of 115 lbs. of extracted honey per colony, spring count. I hived 20 swarms and returned about as many more to the parent hives. The spring was cold and backward, up to the 4th of July. We had a profuse white clover bloom, but it yielded honey very sparingly from about the 10th of June until the 10th of July, when basswood opened and gave a moderate run. About the 10th of August, bees began to gather honey dew rapidly, and kept it up until fall flowers came, which lasted until the drouth cut it short; but the late harvest was decidedly the best run of the season. Your advice to divide for increase rather than trust to natural swarming is, I think, good. I practiced it for several years but have now ceased to do so, for I believe it is an acknowledged fact, by experienced bee-men, that there is no other condition in which a swarm will work so readily, as when it was obtained in the natural way, and if any one asks me for advice as to what plan to follow for increase, I refer them to G. M. Doolittle's article on "How I Clip Queen's Wings and Why," on page 725 of the present volume. That is my plan exactly; but that makes it necessary for the bee-keeper to be on hand. I have had a little experience in moving bees, having just had 18 colonies shipped from Ackworth, Warren Co., Iowa, to Weston, Platte Co., Mo., a distance of 200 miles, by rail. They came on the express, for two reasons; in the first place, the freight would have been $2.65 per hundred pounds, while by express it was $2.15; and, in the second place, they came through without delay, while as freight they would have been a week on the way, perhaps causing the loss of some colonies. They were shipped over the Chicago, Burlington & Quincy Railroad, and I would like to ask if it is customary for railroads to discriminate against bees in the matter of freight, in this way. Their rates for bees in hives was 3 times first-class in Iowa, and double first-class in Missouri, which made it more expensive than to ship by express. I am going to give the bee business a trial either here in Missouri or just across the Missouri river in Kansas; I think this is a good locality for the business, in the forepart of the season, as the pastures are covered with white clover and basswood is abundant, honey locust, red bud and buck brush are plenty, but I do not know how the late harvest will be here.

L. G. PURVIS.
Weston, Mo., Nov. 27, 1882.

[Railroads sometimes make very unjust discriminations; they charge more than twice as much to carry honey in barrels as they do syrup. In the matter of bees, too, they are very unreasonable.—ED.]

Report.—I had, spring count, 63 colonies; increased to 100, and obtained about 8,000 pounds of honey; no fall crop. O. R. FLOURNEY.
San Antonio, Texas, Nov. 27, 1882.

Had No Honey Except from White Clover.—Bees have done well here this summer. I commenced the honey season with 25 colonies and increased to 52; took from them 4,000 pounds of extracted honey and 1,000 of comb honey, and they have plenty to winter on. We had no honey from fruit blossom worth speaking of, and there was but little fall honey; it was too cold both in spring and fall; the only yield of honey we obtained was from white clover. Winter has come now; to-day there are two inches of snow on the ground. My bees are safe in the cellar. I put them in yesterday, the 28th; so we have another winter before us which I hope will be favorable for the bees. H. J. SMITH.
Burlington, Wis., Nov. 29, 1882.

It Pays to Plant for Honey.—I have had the pleasure of seeing bees work, during the past summer, on a number of kinds of honey plants of my own raising, and I am so well satisfied that "it pays to plant for honey," that I shall use all the ground I can spare for that purpose. I set out some catnip, motherwort and sweet clover plants last fall and some Simpson plants in the spring, and am well satisfied with them all as honey plants. They were thronged with bees all day long while they were in bloom, except sweet clover, which is in blossom yet. I saw a few bees at work on it Nov. 11. An acre of ground, at a low estimate, will, if set out with the plants I have named, give employment to 300,000 bees all day long for weeks when there is nothing else in this part of the country for them to work on. I started Simpson plants in a greenhouse, about the time to start early tomatoes; some of them grew six feet high, and I counted over 2,000 blossoms on each plant. I planted Mammoth mignonette, borage and spider plant; the bees worked a little on the spider and borage, but were not eager for it; the mignonette was thronged with bees all the time. I have 33 colonies of bees; I had 9 in the spring and took 2 out of trees; the increase was by natural swarming. T. ELLICOTT.

Fentonville, Mich., Nov. 27, 1882.

$28.15 Per Colony.—My report for the past season is as follows: I began the season with 23 colonies, in fair condition; 2 colonies lost their queens after May 1, and had to rear others, to take their place, thus lessening the general average. The early part of the season was cold and backward and bees had to be fed until June 10, after which the season was fine till late in the fall. My bees increased to 42 good colonies, and I obtained 3,200 lbs. of fine comb honey from them, all in 1 and 2 lb. sections, except 400 pounds, being an average of 140 lbs. spring count. My best colony gave 245 lbs., all in 1 lb. sections, except 10 lbs. My honey sold at an average of 17c. per lb., making from this colony $41.65. On Nov. 25 my bees were put in winter quarters in good condition, all having on an average 40 lbs. of good thick honey. They are in a cellar built in a side hill, with good ventilation and 3 feet of earth and straw on the roof. In this the temperature will vary but little, as I know by experience, and fully expect them to come out in good condition, let the winter be mild or severe. In the above report I have counted the 20 new swarms at one dollar each. J. V. CALDWELL.

Cambridge, Ill., Nov. 28, 1882.

The Past Season in Scotland.—Our honey season here, is now a thing of the past, and I am sorry to say it has not been so successful as was expected this year. In some quarters, such as Ayr and Perth Shires, a fair quantity was gathered in. I saw Mr. Wood (of Benmore, Argyleshire) yesterday and he said that his bees have been pretty successful, considering the weather. The observatory hive (which I wrote about in my last report of our Shire) has been a great success; the bees in it have gathered in a good quantity of honey, but he intends to leave it all with them, to bring them safely through the winter. He intends to keep the bees in this hive permanently and wishes to have them strong and healthy in the spring. The bees around here are all in their winter quarters, so that all will be dormant for a few months. The most of the bee-keepers here winter them on the outside, very few putting them in cellars or out-houses. Mr. Bennett left here for a cruise in the Mediterranean about a month ago; he intends to visit Mr. Benton in Cyprus, before returning home. The weather has been very bad here for some time, and we have had a considerable amount of rain of late. JOHN D. HUTCHISON.

Glasgow, Scotland, Nov. 11, 1882.

OLDEST BEE PAPER IN AMERICA — THE AMERICAN BEE JOURNAL — ESTABLISHED IN 1861

ADVERTISING RATES for 1883.

20 cents per line of space, each insertion,

For either the Weekly or Monthly Editions.

A line of this type will contain *about* 8 words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, 50 cents per line.

SPECIAL RATES.—Advertisements will be inserted in both Weekly and Monthly editions, at the following prices, if wholly paid in advance:

SPACE.	One month	Two mo'ths	Three mo'ths	Six mo'ths	One Year.
1 in. 12 lines	10.00	18.00	25.00	38.00	50.00
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6 in. 72 lines	45.00	70.00	90.00	130.00	175.00

For the Weekly alone, 20 per cent. less than the above rates. On yearly advertisements, payments may be made quarterly, but must be in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

THOMAS G. NEWMAN,
925 West Madison Street., Chicago, Ill.

Special Notices.

☞ A few of our subscribers are in arrears for the present year—having requested us to continue, and they would pay soon. Will all such please take this as a request to send on the two dollars with a renewal for next year, if possible.

◆

☞The American Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., December 4, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The supply of extracted honey is fully up to the demand. My quotations are: 6½c. for dark and 8½c. for light, delivered here.

BEESWAX—It is quite scarce. I am paying 27c. for good yellow wax, on arrival; dark and off colors, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—Demand is good for extracted honey by the barrel for manufacturing purposes and for table use. The demand is very good for honey in 1@2 lb. jars. A good deal of comb honey could be sold if we had a good article at a rate within the views of the consumer; *i. e.*, which could be sold at 20c. in the jobbing way and 25c. at retail.

We pay 7@10c. for extracted, and 16@20c. for good comb honey in sections

BEESWAX—Is in good demand at 20@27c. per lb. on arrival. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey does not keep pace with the receipts. There is a large surplus on this market at present, and prices are from 2 to 3c. lower than last month.

We quote: white comb honey, in 1@2 lb. sections, 17@18c. Dark comb honey, hardly any demand. It is held at 12½@15c. Extracted—White brings from 9@10c.; dark, 8@9c.; kegs, half-barrels and casks bring about same price.

BEESWAX—Choice Yellow, 30c.; dark to medium, 18@25c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—A sailing vessel this week took 1,018 cases for Liverpool from a packing house. The market is quiet. Such qualities as are in good supply, dark and medium, are in poor demand.

White comb, 18@20c; dark to good, 12@15c; extracted, choice to extra white, 9@10c.; dark and candied, 7½@8½c.

BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—In fair demand. Comb, large, sells at 16c., medium do., 17@18c., fancy small do., 19@20c. Extracted at 8@9c. in barrels and half barrels, and 10c. in smaller packages; strained, 6½@7½c.; choice, in small fancy packages brings more.

BEESWAX—Prime bright steady at 26@27c.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—There has been no change in honey the past week. No. 1 white, in 1 lb sections, continues in good demand at 21@22c. per pound. No. 1 in 2 lb. sections, is also in good request at 19@20c. Second grade, less active, at 1@2 cents ⅌ lb. less. Extracted, in all shapes, was dull and very little sale. Some Louisiana honey, rather dark, in barrels,, was sold at 9c.

BEESWAX—Prime quality, 25@28c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is a moderate demand for choice lots of clover honey, in view of the holidays, and prices steadily sustained. Buckwheat and extracted honey rather slow.

We quote: White clover, fancy, small boxes, 19@22c; white clover, fair to good, 16@18c.; buckwheat, 13@16c.; extructed clover, 10@13c.; extracted buckwheat, 9@10c.

BEESWAX—The market continues quiet and without essential change.

Western, pure, 29@30c; Southern, pure, 30@31c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—30c.

CROCKER & BLAKE, 57 Chatham Street.

◆

So we may rely upon President Miller to do anything in reason for the welfare of the meeting and the pleasure of those in attendance.

New Premiums for 1883.

As the season for reading has now arrived, we hope that each of our subscribers will endeavor to send at least one new subscriber for the Weekly BEE JOURNAL for 1883 and thus not only help on the cause of progressive bee-culture, but assist in sustaining the only Weekly bee paper in the world.

Providence has smiled on the bee-keepers during the past season, and as a general thing they are abundantly able to procure a good assortment of bee-literature.

In order to encourage every one who keeps bees, be they few or many colonies, to thoroughly read the many very interesting books on bee-culture, now published, we have determined to make liberal offers, which will be available until January 1, 1883, as follows:

To any one sending us $8 for any books they may select from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for one year.

To any one purchasing $4 worth of books, selected from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for six months or the Monthly for one year.

Any one sending us a club of two subscribers for 1883, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly is now permanently established, and will be continued as heretofore.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ The BEE JOURNAL is mailed at the Chicago postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

☞ Articles for publication must be written on a separate piece of paper from items of business.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Subscription Credits.—After sending subscriptions to this office, we would respectfully ask every one to look at the label on the wrapper of the next two papers, and there they will find the credit indicated thus: Those who have paid for the first six months of next year will find "June 83" after their names. Those who have paid for the whole year will find "Dec. 83" on their papers. The credit runs to the *end* of the month indicated. If the mark is "Dec. 82," it means that the subscription is paid until the end of the present year. Please remember that the credit given on this label is a sufficient notification of subscriptions due and receipt for payments made. If not so indicated within two weeks after sending money to us, you may be sure something is wrong, and should write to us about it. It will save annoyance and trouble if our subrcribers will give this matter due attention.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

☞ Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

☞ The time for the usual winter rush of correspondence is here, and we wish to impress upon all our patrons the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address that we already have on our books.

☞ The result of the election has proved a grand success, but not more so than Kendall's Spavin Cure is proved to be every day. 48w4t

Honey as Food and Medicine.

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We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

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We will give $20.00 in gold to the person telling us how many verses there are in the New Testament Scriptures (not the New Revision) by December 10th, 1882. Should two or more correct answers be received, the reward will be divided. The money will be forwarded to the winner December 15th, 1882. Persons trying for the reward must send 20 cents in silver (no postage stamps taken) with their answer, for which they will receive the Christmas *Monthly*, in which the name and address of the winner of the reward and the correct answer will be published. This may be worth $20.00 to you; cut it out. Address RUTLEDGE PUBLISHING COMPANY, Easton, Penna.

◆

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

Santa Claus is said to be putting in a large stock of Noyes Dictionary Holders and Noyes Handy Tables among his supplies for this year. This is well. No more appropriate and acceptable presents can be made at so small a cost. The prices are greatly reduced. A large illustrated catalogue will be sent free on application to L. W. Noyes, 99 West Monroe Street, Chicago.

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☞ Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

☞ Our new location, No. 925 West Madison St., is only a few doors from the new branch postoffice. We have a telephone and any one in the city wishing to talk to us through it will please call for No. 7087—that being our telephone number.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

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Worth 20 times its cost to any bee-keeper

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BEE-KEEPERS'
CLUB LIST
FOR
1883.

If not, **you want one**, as it is full of good things, is worth reading and will save you some money. To get one write your address *plainly* on a postal card and direct it to

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JAS. FORNCROOK & CO.
Watertown, Jeff. Co., Wis., Sept. 1, 1882. 49m2t

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For the manufacture of
BEE-KEEPERS' SUPPLIES.
Dunham and Root Foundation a specialty.
Italian Queens and Bees from March to November.
☞ Send for my Illustrated Catalogue.
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THE INDEPENDENT is not denominational. Its creed and field are broader than any sect. As a Christian journal, its aim is to strengthen and extend Evangelical religion and to defend it against the attacks of Materialism, Atheism and unbelief. It is free to approve or criticise in any of the denominations whatever it believes is designed to advance or hinder the progress of the Gospel of Christ.

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VERY FINE EXHIBITION BIRDS, and
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BEST IN THE WORLD.

Mowers, Hay Tedders, Horse Hay Rakes, Spades, Shovels, Scoops, Steel Rakes, Forks and Planters' Handled Hoes.

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Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
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We will with pleasure send you a sample copy of the **Monthly Gleanings in Bee-Culture,** with a descriptive price-list of the latest improvements in **Hives, Honey Extractors, Comb Foundation, Section Honey Boxes,** all books and journals, and everything pertaining to Bee Culture. *Nothing Patented.* Simply send your address *written plainly*, to A. I. ROOT, Medina, O.

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Hand, Circular Rip Saws for general heavy and light ripping, Lathes, &c. These machines are especially adapted to **Hive Making.** It will pay every bee-keeper to send for our 48-page Illustrated Catalogue.

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Five years established and never known to fail in a single case, acute or chronic. Refer to all prominent physicians and druggists for the standing of Salicylica.

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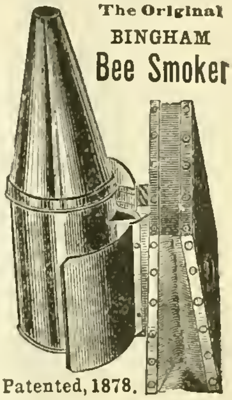

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Ueber Bienenzücht.

Bienen Kultur, oder erfolgreiche Behandlung der Bienen, von Thos. G. Newman. Dieſes Pamphlet enthält Belehrungen über folgende Gegenſtände —Oertlichkeit des Bienenſtandes—Honig pflanzen—Erziehung der Königin —Füttern — Schwärmen —Ableger—Verſetzen—Italieniſiren—Züſetzer von Königinnen— Ausziehen—Bienen behandeln und beruhigen; weiter enthält es ein Kapitel, worin die neueſte Methode für die Herrichtung des Honigs für den Handel beſchrieben iſt. Preis 40 Cents.

Bienenzüchters Leitſaden.—nebſt gründlicher Anleitung zur Behandlung der Bienen. Von H. A. King. Es iſt nicht nur lehrreich, ſondern auch äußerſt intereſſant und praktiſch. Preis 40 Cents.

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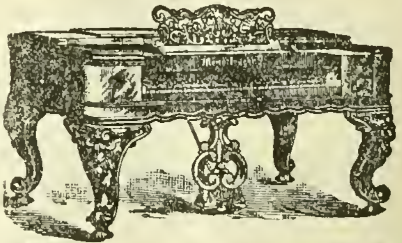

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OLDEST BEE PAPER IN AMERICA

THE AMERICAN BEE JOURNAL

ESTABLISHED IN 1861

DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.......... 785
The Michigan Convention.......... 785
Planting Sweet Clover.......... 786
Sagacity of Bees.......... 786
Clubbing List.......... 797

Among Our Exchanges—

Packing Bees in Chaff.......... 786
American Honey in England.......... 787
Have Bees a Language?.......... 787
The Honey Production of To-Day.......... 787
Providing Pasturage for Bees.......... 787

Correspondence—

Golden Willow as a Honey Plant.......... 788
The Rearing of Cheap Queens.......... 788
Mating of Queens.......... 789
Introducing Queens without Encaging.......... 789
Honey Dew Explained.......... 790
The Transformations of Life.......... 791

Convention Notes—

Local Convention Directory.......... 791
Michigan State Convention.......... 791
  How to Begin Bee-Keeping.......... 791
  Small Frames or Sections.......... 791
  Side and Top Storing.......... 792
  Overstocking a Locality.......... 792
  Clipping Queens' Wings.......... 792
  Wintering Bees.......... 793
  Comb Foundation.......... 793
  Pasturage for Bees.......... 793
Wintering and Springing of Bees.......... 794
Convention Notices.......... 794

Selections from Our Letter Box—

Facts About Bees.......... 795
Good.......... 795
Lime for Wintering.......... 795
Poor Honey for Winter Use.......... 795
Old Fogy Bee-Keepers.......... 795
My Report.......... 795
Poor Honey Season.......... 795
Snow, and Upward Ventilation.......... 795
Spring Dwindling.......... 795
A, No 1.......... 795

The Michigan Convention.

As announced in the BEE JOURNAL, we attended the State Convention of the bee-keepers in Michigan, held at Kalamazoo last week, a report of which may be found in this issue of the BEE JOURNAL.

The convention was well attended, considering the extremely disagreeable weather that prevailed during the two days when its sessions were held.

The Michigan State Bee-Keepers' Association is the oldest in America, and we are pleased to say that it has been among the first to realize the importance of appointing a committee for the purpose of conferring with the officers of the State Fair relative to giving the bee-keeping interests their due share of attention and prominence at the Fair. This was done last year, as was duly noted in the report of the proceedings published in the BEE JOURNAL last December, and the results were very flattering indeed. The display was very creditable, and the officers of the State Fair were so well pleased with the attention it attracted from those in attendance at the Fair, that they say, anything in reason in the shape of accommodations and premiums demanded by the bee-keepers for the coming State Fair, will be granted.

The present Secretary, Mr. H. D. Cutting, was the chairman of the committee, and the results show what can be accomplished by one man, when thoroughly in earnest. He was supported but very little by the rest of the committee, except by encouraging words, and acted almost alone in the matter. He now has the satisfaction of knowing that his labors were not only crowned with success, but they were duly appreciated by the Bee-Keepers' Association. We hope that the next Fair will have a far greater exhibit, larger premiums and a more suitable building and location on the Fair grounds.

Let this stimulate Associations all over the land to exertion in a similar way and thus aid in popularizing the demand for honey, as well as giving general information in regard to bees and honey to all who may attend the Fairs for 1883.

☞ In the last number we enclosed a blank, to be used in sending on subscriptions for 1883. Very many run out with the present year, and by renewing *at once*, it will save us much labor in taking the names in type from the subscription list, and then, that of returning them a few days after. We hope all, who can, will send on their renewals immediately and save any errors that might occur during the rush at the end of this month, in the holidays. May we ask you, reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

☞ Attention is called to a few changes in our clubbing list for 1883, as given on page 797. Those interested will please take notice.

☞ The *Bee-Keepers' Magazine* is to have a Poultry department for 1883, and the price will be $1.25 a year. Issued monthly by King, Keith & Co.

Planting Sweet Clover.

Dr. R. W. Keene, Versailles, Ky., writes us as follows:

I desire a sure way to get a good stand of sweet clover? I have been sowing it for three years, have tried all seasons and every plan, and it does not come up for me. I sowed about ten acres last fall and spring, in different places, and I think ¼ of an acre would cover the whole of it now, that is worth anything. How will it do to sow it on rye this winter? I thought I would sow four pounds of alsike and two pounds of sweet clover to the acre, on ten acres of rye that I have. How will that do? It does not grow worth a cent on poor clay land for me, and now, I will try it on good land. Our honey crop was almost nothing the past season. I obtained 1200 pounds from 43 colonies, spring count, and increased to 80 colonies. Bees in good condition for winter, and I hope, from the present abundance of white clover, to have a good harvest for 1883.

We are astonished at the statement made by Dr. Keene. We have had no experience in sowing it as a field plant, having a large amount of it growing spontaneously over scores of acres near our residence. We are able only to give the experience of others. Sand is said to be best for it. Prof. Cook says that it grows luxuriently on sandy soil, and it is generally reported to do well on any kind of soil, and in every climate.

Prof. C. E. Thorne, of the Ohio State University, thus testifies regarding its value as a field plant: "It will grow luxuriantly in hard, poor clay, where even white clover will scarcely live at all, and grows much more rapidly than red clover in any soil, while in the soils that are, as is said, 'clover-sick,' it thrives as well as anywhere. It is a good forage plant for bees and for cattle, and is well adapted for soiling, as it makes a growth of four to six feet during the season, and is said to bear two or three cuttings. A German analysis gives its hay a feeding value of fifteen dollars per ton as against sixteen dollars and twenty-eight cents for very good red clover hay. While red clover, upon which our farming in many sections, and especially in clay lands, depends so essentially for crops of grain, is becoming more and more uncertain. It would seem to be worth while to try this 'fast weed' as a resource for recuperative green manuring, in heavy soils especially."

But its greatest recommendation for the general bee-keeper is the fact that it requires no especial cultivation, thus making it particularly desirable for roadsides and commons. Being a biennial, the seeds possess great vitality, and may be kept over for a long time, and scattered, a handful at a time, as opportunity offers, or a bare place develops itself. Where possible to devote even a limited time to its cultivation, the ground may be plowed and the seed lightly harrowed under in the fall with winter wheat, or planted with barley; or in early spring it can be sown with wheat, oats or rye, without detriment to the grain. If wanted, however, in its greatest perfection, it should be planted in drills four feet apart, and once hilled up with the cultivator. Sweet clover blooms and yields nectar continuously in this latitude from about June 10th till Aug. 1st, when the first seed crop matures, which is succeeded with a new foliage and profuse second bloom about Aug. 15th, and this continues till winter sets in. If a part of the field be mown about July 1st, it will bloom and yield nectar, except when rains are falling or during the prevalence of strong, adverse winds, from the middle of June till past the middle of October—certainly as long a period as our impatient little workers can utilize it; nor will it then cease to "waste its sweetness on the desert air," but, after the advent of winter, when all else has passed into "the sere and yellow leaf," its modest flowers will waft a fragrant good-bye to the bees on their last flight, and leave pleasant memories for their long winter dreams.

H. S. Hackman, of Peru, Ill., commenced the season of 1881 with 10 colonies, which he increased to 70, and obtained 1,200 pounds of surplus honey —1,000 pounds of extracted and 200 of comb honey—equal to 120 pounds per colony, spring count, and an increase to over seven colonies from one! Mr. Hackman, who is an experienced bee-keeper, and whose veracity is unquestionable, writes: "Please find inclosed flowers of the sweet clover, picked from the roadside, on the prairie, yesterday, Nov. 14. I suppose I owe my wonderful summer success largely to the sweet clover. We had the hottest and driest season we ever had—no rain from June 15th until Sept. 15th. The hotter and drier the more honey, seemingly. Sweet clover, as a weed! Although it has been growing in our roads, on waste land, along railroads, and on our hillsides for twenty-five years, it does not seem to get into the fields, except where water has carried the seeds into low places."

Sagacity of Bees.

An English *Journal*, in 1841, gave the following item on this subject:

A few pounds of honey were taken from a hive (about six miles from London) and placed in a closet, under lock and key. The windows of the room having been left open, the bees obtained admission, and, entering the closet under the door, removed the whole of the honey. The cells of wax were left entire and the honey was conveyed to the central division of the hive, where it was safely deposited during the day. It is evident that spies must have been employed to observe where the honey was placed, and that as soon as the information was communicated to the hive, they took this vigorous measure for the recovery of their stolen property. It is remarkable that they should have succeeded so completely, and in so short a time, since the closet was entirely dark and they could only enter by a crevice under the door.

This circumstance is by no means proof that the bees had sent out spies, who discovered the stolen honey and informed their comrades of its whereabouts. When there is no honey to be obtained from the flowers, bees will go in where any open door, crack, or crevice large enough presents itself, in search of sweets, and if there is any honey to be found, their sense of smell is strong enough to find it; and when one has found it others will follow, in hope of obtaining some of the treasure.

AMONG OUR EXCHANGES

MISCELLANEOUS.

Packing Bees in Chaff.—Mr. F. O. Addition, Dexter, Me., writes as follows, to the *Home Farm*:

For the average bee-keeper I think wintering on the summer stand with proper protection the safest way. My method is this: Take a box large enough to give from four to six inches space around the hive except on the front, that should be two inches. Make a spout from the entrance of the hive through the box for the free passage of the bees at any time. Remove the cap from the hive, spread a piece of burlap or other porous material over the frames, then pack the space around the hive with dry sawdust or wheat chaff, with a foot on top directly on the cloth. Then put on a tight cover and the bees are in a good place to withstand the long, cold winters of Maine. I have known two quarts of bees to be wintered with success in this way. The bees should first be confined to as few frames as will give them sufficient stores, using a chaff division board.

American Honey in England.—The London *Grocers' Journal* of Nov. 17, 1882, contains the following on the above subject:

California ranks first among the honey-producing States of the Union. The soft and equable climate, in which wild flowers of every variety are in bloom for seven or eight months in the year, makes her peculiarly the home of the bee. Even before the building of the Pacific railway the production of her apiaries was enormous, and the honey market was glutted.

On the opening of the road, Mr. W. M. Hoge began to transport honey from the Pacific to the Atlantic coast, taking it to New York in barrels, selling it to the retailers, and thus finding a good market.

It was not until 1878 that the problem of safely bringing honey in the comb from California to England was satisfactorily solved. The infinite care and judgment demanded in the transportation of a cargo, and the extreme liability of breakage from the breaking away of the comb, from its bruising through the slightest jolting of the railway vans, were considered insurmountable difficulties.

Mr. Hoge, whose name is so well known in connection with honey, both here and in America, and of whom the AMERICAN BEE JOURNAL once said, "To Mr. Hoge, more than to any other man living, is America indebted for developing the great demand for American honey in Europe, as well as greatly enlarging the call for it at home. In saying this we but accord him that credit which is his honest due," overcame these difficulties, and showed that the transit of honey in the comb could be made as successfully as a cargo of tea.

In 1878, Mr. Hoge successfully landed in Liverpool 80 tons of comb honey, and, early in 1879, another cargo of 100 tons in London. Since these pioneer importations the sale of American honey in Europe has been unflagging.

In the extreme southwestern corner of the United States there is a narrow strip of country known as the bee belt of California. The hillsides are covered with a growth of stunted brushwood, from which springs a luxuriant growth of white sumac and other flowering shrubs, which bloom there nine months of the year—our honey season in England does not last that many weeks. There are no less than three hundred apiaries of several hives each along the "Bee Belt."

The California bee season, Mr. Hoge says, begins by February 1. In March or April the bees swarm, and the bee culturist has lively times saving his swarms.

The science has become so systematized now that the apiculturist knows within a day or two when a given colony may be expected to swarm, and as the young bees always settle somewhere near the parent hive at least once before selecting their new quarters, a swarm is seldom lost. The flowers are at the height of their luxuriance in May and June, and the taking of honey is begun usually about May 20, and the bees are kept at work as long as the flowers last. They cease to yield more than a sufficient quantity than to subsist the bees, in the early part of August, but the little workers are able to find enough to live on without consuming their stores, as late as October. After October begins, although the air is still mild and spring-like, the bees cease to work and retire into a semi-dormant condition. Once every eight or ten days, a colony will turn out at midday and fly around for an hour or two in the sunshine, but they never fly far from home, and are never seen at work. The food of the bees in the bee belt is generally the flower of the white sage, a plant that closely resembles the garden sage, but must not be confounded with the wormwood species, and has not the family bitterness. Next to the sage in importance as bee food is the sumac. There is no poisonous flowering plants in the bee range, and the honey has none of the colicky qualities that make the honey from semi-savage countries so objectionable.

Mr. Hoge, whose headquarters in England are at "The Apiary," in Leconsfield-road, London, represents some of the largest American bee-keepers, and speaks encouragingly of the future prospects of the honey trade in this country.

Have Bees a Language?—A clergyman writes to the *British Bee Journal* the following incident, as proof that bees have a language:

On Ascension Day, 18th of May, just as my church bells began ringing for service I took a walk round my apiary, the sun was shining beautifully and the weather in every way lovely. A hive which about a week before I had fitted with comb foundation, ready for the next swarm, attracted my attention, for there were hundreds of bees flying about it and going in and out of it. I concluded, therefore, that probably a swarm was coming to it. I watched the bees carefully—ten minutes later there was scarcely a bee to be seen near it. I pretty well knew then what was coming. I kept a pretty full lookout all round when all of a sudden a roar of bees was heard in the distance, getting louder and louder; over the roof of my cottage they came, and straight over the hive where a quarter of an hour before I had seen several hundred of reconnoiterers. They wheeled high up in the air almost out of sight, and then down they came like a water-spout, covering the whole roof of the hive, legs, alighting-board, and a good space of the ground. Now, sir, who can doubt but that the bees forming the reconnoitering party left the hive together in order to pilot the others on? There was apparently no reason why they should so suddenly have left unless it were because the sun was out the whole time, and the air beautifully warm. After I came out of church I found the bees working briskly in their new home. I then went in search of the owner, and soon found out they had come from a hive about half a mile off, the man failed to keep up with them, and so lost sight of them. Now, sir, here is a proof that bees like comb foundation, and do you not think it a proof that they have a language too?

The Honey Production of To-Day.—The Germantown *Telegraph* gives this description of the honey of to-day, as compared with that of yore:

The honey culture, in fact, is a science, and should inspire in those who pursue it a love for it outside of the profit account, and in this case the enjoyment which it imparts must be considered as a part, and a very desirable part of the returns.

The improved hives, which have taken the place of the old, cumbrous ones that were so awkward in handling and failed to yield an equal supply of honey when compared to these re-modeled ones, makes the care of bee-keeping much easier and pleasanter. The small sections, each holding one or two pounds of honey, which go with their disposal, make the article much more salable than formerly, though they require careful handling. The bees have a way of hermetically sealing the combs, and if these are kept intact, the contents will remain undiminished in quantity and unimpaired in quality. If, however, the combs become cracked for want of care in packing, handling and transporting, the sweet store crystallizes and becomes opaque and unmarketable, though not very materially injured. Altogether, with due care and a proper management of this beautiful and interesting branch of domestic industry, the apiary should be found upon a dozen farms where it is now found only upon one.

Providing Pasturage for Bees.—The *Indiana Farmer* makes the following very sensible remarks on the subject:

Planting for honey has ceased to be an experiment, and is sure to be one of the certainties of success in modern bee-culture. Situated as we are we feel very perceptibly the several regular honey drouths, as any lack of the nectar flow in the several regular honey-producing plants. We have not had the time or room for extensive experiments in this line, but have watched closely those made by our friends and neighbors. And we note the fact that the best and most progressive bee-keepers of America as well as those of the Old World have decided it a success. Sweet clover, (melilot) is probably at the head of all special honey-producing plants for planting, under all conditions and circumstances, and we noticed, even up to middle of November, the bees working, on a few scattered flowers of this plant in protected places.

Figwort is a decided favorite and has some advantages as it does not die out, but grows from the root year after year. Spider plant is another. J. Lammey, Bateham, Ind., says in a letter to us Oct. 15: "The spider plant seed I got of you last spring was a decided success. It began blooming July 1, is in bloom yet, and to see the bees on it of a morning would delight the heart of any bee-man." In planting sweet clover we notice that sown in the fall and winter does the best, and we conclude the cold of winter to be of some benefit to the seed thus sown. A united effort of the many bee-keepers would soon produce a flora in the land of uncalculable worth.

CORRESPONDENCE

For the American Bee Journal.

Golden Willow as a Honey Producer.

E. B. BEEBEE.

As a great deal depends on the strength of our colonies when the main honey harvest commences, perhaps it is well for us to look closely to what makes them so.

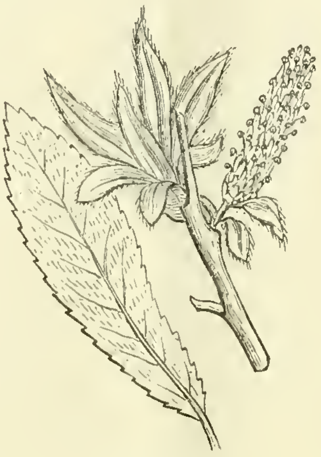
As I have had bees for some time in localities where there was no willow, and at the same time had others where there was plenty of willow, I think I can tell something about its value to bees.

As soon as this willow begins to bloom, which is about the last of April, our bees commence to work in good earnest; and if we had as fine weather for bees to work as we have in July, I think they would gather almost as much honey from it as they do from basswood. As far as my observations extend, I think they gather more honey from willow than from apple blossoms, and we have plenty of both. A bee-keeper came to my apiary when willow was in bloom and was astonished to find that my bees did not rob, when he saw a hive of frames full of honey exposed in the apiary; and when I called his attention to the bees working on the willow he thought he never saw bees work busier.

The quality and flavor of the honey is very poor. Although it is not as dark as some, it has a very repugnant and inferior flavor, but I cannot see but that they build up and breed just as fast on it as on any other, and that is just what we want at this season. Aside from this, we have the advantage of knowing there is no robbing going on at this most critical time; as with our bees in the locality where there is no willow, they have to be closely watched and the entrances contracted, especially if there is work to be done which requires opening the hives; we also find there is a vast difference in the strength and condition of the colonies in these two locations, say about the last of May.

I do not wish to compare willow as equal to basswood or any of the main honey plants, but, coming as it does first in the spring, it is of much value as it has the double advantage of stimulating the bees to breed and keep them from robbing and spring dwindling.

I know of no tree or shrub that is as easily propagated as this willow; it will grow anywhere without any care or cultivation, wet or swampy locations being preferable, and it does not spread any more than as it is set out or planted. It also makes a fine shade tree, being handsome for lawns, yards or walks. It is a very rapid and thrifty grower; a cutting set out in the spring will make a good sized tree in four years. There are three varieties of willow in this vicinity, but the golden or yellow willow is far preferable for the bees, as the others yield but little honey compared to this one.



The Willow.

Oneida, N. Y., Nov. 27, 1882.

For the American Bee Journal.

The Rearing of Cheap Queens.

G. M. DOOLITTLE.

EDITOR BEE JOURNAL: The following article I wrote for the *Rural New Yorker* but thinking it may be interesting to the readers of the BEE JOURNAL, I should be glad to see it in its valuable columns:

The great Creator of all things pronounced his work good when he rested from the same, and so it came to pass that it was good for bees to multiply and increase by natural swarming. In the preparation for this, the first work is the laying of eggs in the drone cells which are already built; or if no drone comb is in hive, some is built, or worker comb is cut down and drone comb substituted for the purpose of producing drones, or male bees. Next, large acorn-cup-like cells are built for a royal cradle for the young queen, in which in due time the reigning queen deposits an egg intended for a queen. At about the time this egg hatches, a copious supply of food is placed in this large cell for the royal larva to feed upon, and as it grows more food is given, till it actually floats in a sea of food—so much so that I have repeatedly seen a lump of uneaten food larger than a marrowfat pea left in the bottom of the cell after the queen had emerged therefrom. Another thing which is always noticeable is that this food is prepared and queens reared when forage (both honey and pollen) is abundant, and at no other time do we expect natural swarms.

Again, there is a hiveful of bees of all ages, from the nurse bees which prepare this food to the aged veteran with wings tattered and torn with the labors of the field. Thus, with prosperity on every side, the highest queens of the highest type are raised. Now, if such queens as the above were reared and sold for a "dollar," or one dozen of them for $9, the cheap queen controversy would have had no existence. In the course of time, it was ascertained that by removing the queen from the hive the bees could convert the larva hatching from an egg intended for a worker bee into a queen by building a queen cell over a worker cell and supplying the same with royal jelly, the food of the queen larva. Thus queens without number could be reared at the pleasure of the apiarist, either during the season of natural swarming or at any other time of the year when there were eggs and larvæ in the hive. All went well for a time, but after a while it began to be whispered by our most practical apiarists that such queens were tending toward depreciating the quality of our bees; so it was proposed that, as a remedy, all queens should be reared as nearly as possible under the same conditions as those reared by natural swarming. Others claimed that such talk was nonsense, and still continued on as before. At about this time I was greatly excited over the bee question, and so to accomplish the most in the least time, I took to rearing queens "artificially," as this process was termed at that time. All seemed to go well the first season, and I was about to decide against our practical bee men, and say such queens were as good as any, although I invariably found that such queens were much smaller than those reared in natural swarming, and after the queen emerged from the cell not a bit of food remained, but the cell was licked as dry as any drone or worker ever licked its cell.

The next season queens were reared in the same way, although I saw quite a perceptible difference in the working qualities of my bees, but I was not fully convinced of my mistake till through the next winter and spring over two-thirds of my queens reared the season previous, died of old age, while queens reared by natural swarming lived from three to five years. Fully convinced that such queens were not as good as any, I have, as far as possible since that time, had all my queens reared from cells produced during natural swarming.

Soon after this it was proposed by a certain man, prominent before the bee-keeping world, that queens should be sent out and sold as soon as they were found to be laying, without any guarantee of any sort, and that the price be one dollar. Heretofore none but tested queens had been sold, and as the price had been from three to ten dollars each, fair queens had been the rule, for at these prices pains could be taken to rear queens as good as possible by any process except natural swarming. As the public had demanded this for tested queens, but few of a low grade as to prolificness and short life were sent out. Many opposed this untested dollar-queen business, but as the people demanded something "cheap," the business grew to large proportioned. Those receiving queens which were dead were not satisfied with no guarantee, and demanded that such loss should be made good. Thus one claim after another was made till we have to-day queens advertised at 90c. each, or nine dollars a dozen. safe arrival guaranteed. As a result of all this we soon hear our prominent "dollar-queen" man saying that the way to rear good "dollar queens" was to take a comb containing eggs from your best colony, place it in an empty hive, then set it in the place of another colony and the returning bees from the field will raise good queens. Thus these old bees, long unused to preparing food for feeding larvæ, are forced to do the best they can at queen-rearing, in season or out of season to meet this increasing demand for cheap queens.

Another, crying "Headquarters for Dollar Queens," says about Aug. 20th, "now is the time to rear good queens cheaply." Upon inquiry it is found that small nucleus boxes 5x6 inches square are used with a little handful of bees which are compelled to rear queens at a time when the bees should be preparing for their winter repose. Is it any wonder that a party writes, "out of nine dollar queens purchased, seven did not live six months and only one of them a year?" Another says: "I am disgusted with this dollar queen business; five out of six purchased this season, died of old age." In this controversy about cheap queens, talk about the dishonesty of the parties has had a prominent place, as if there was not room for dishonesty outside of the queen business. The question is not as regards honesty or dishonesty, but it is regarding a traffic which demands such a scrimping and pinching on every side in order to live, that the quality of our bees is liable to be injured for all future time.

Talk about queens reared as above being as good as those reared by natural swarming! No one really believes such a thing. But says our worthy friend W. Z. Hutchinson, in the *Rural* for July 16, "You say that Mr. Doolittle 'evidently sees and feels deeply the tendency of the cheap queen traffic to depreciate the quality of our bees.' Judging from his writing he certainly does, but what are we to think of his rearing and advertising for sale 'dollar queens?' Actions sometimes speak louder than words!" For some reason or other Mr. H. forgot to say that such queens were reared under protest by myself. Merchants often keep goods they do not approve of because the demand calls for them, and they must keep them or lose customers. This is why I sell "dollar queens" and probably no one knows it better than does Mr. H.

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☞ When changing a postoffice address. mention the *old* as well as the new address.

For the American Bee Journal.

Mating of a Queen Bee.

S. A. SHUCK.

On the 10th of July, having some queens that had been kept confined for the purpose, about 2:30 p. m. I liberated, before an open window, a very strong and active one, five days old, and proceeded to loop a silk thread around her waist. After many fruitless efforts I succeeded in doing so. The thread was attached to a pole about 18 feet long, the thread being about 10 feet long. I carried her to the apiary, and hoisted the pole, allowing her to swing at the end of the thread, or fly as far as the thread would permit. A stiff breeze was blowing, but the weather was clear and warm, and drones were flying in great numbers. In less than a minute several drones were pursuing her and the number increased rapidly, until there were, perhaps, fifty, when. for some reason, they all dispersed, like a flash. In a short time, perhaps, a few seconds, and, at times, a minute or more, they were again chasing her, and disappeared in a twinkle again.

This was kept up for some time, until I thought the queen needed some food and let her down and gave her some honey. This was repeated several times.

During the time the drones were chasing the queen, a great many caught her, one at a time, and would cling to her a few seconds and then let go. Finally, one caught her, and she appeared to have caught the thread with her front feet. They appeared to be face to face and for a few seconds only. The drone, letting loose his hold, swung head downward, and the instant he reached a straight line, his head in the opposite direction from that of the queen. Snap! Did you ever, in your boyhood days, pinch the ripe seed pods of the wild touch-me-not to hear them snap, and see the seeds cast in every direction? The above occurrence reminded me of these ripe seed pods, and the drone struck the grass near my feet, as if impelled by a force similar to that which casts these ripe seeds away.

The queen bore the evidence of her mating, but there was not that white thread-like appendage that we see in so many cases where the queen has just mated, but in this case the organ she held was large and appeared to be perfectly smooth, so I conclude that, in most cases, the drone is not so easily freed from the queen, as in this case.

Later in the season I tried to secure, in the same way, the mating of queens, with imperfect wings. The drones appeared, as before, but I failed to accomplish my undertaking.

The question now arises, have I gained any information leading to the successful mating of queens in confinement. This is what prompted me to make the above experiments. I had learned that others had mated queens in this way, but not one word have I seen in regard to the disposition of the drones in such experiments. During my last experiment the weather was very still and pleasant and the actions of the drones were observed with more ease and more definite conclusions were formed concerning their natural actions. On such occasions they become very much excited, and notwithstanding their sudden fright and dispersal, occasioned by any unnatural turn or jerk of the queen, caused by her attachment to the thread, they may be seen several rods away and in different directions, chasing each other, and often, a dozen or more together, as though each suspected the other of chasing the queen. One of these little swarms, as it were, of drones, I saw come to the ground in chasing each other, and if there had been any virgin queen in the apiary, except the one I had attached to the thread, I should have thought they were in pursuit of her.

From my observations in these little experiments, I have concluded that any efforts to secure the mating of queens in small boxes, barrels or any like devices, will in the main, prove unsuccessful. However, it may be accomplished in a building covering several rods of ground, provided sufficient light can be given, and at the same time have sufficient shading to prevent the bees from striving to get out.

Bryant, Ill.

British Bee Journal.

Introducing Queens Without Encaging.

SAMUEL SIMMINS.

It is well known that a serious loss is occasioned to a colony of bees, especially in early spring, by the exchange of queens through the stranger being caged for 48 hours, on even a less time. The colony does not only lose the eggs that might have been produced during that time, but the sudden check imposed upon a full laying queen by being imprisoned, throws her back so much, that she does not recover her usual fecundity for some days. Imported queens will often not lay at all for the first few days; and the original sovereign having been deposed or destroyed the colony suffers the loss equivalent to an average swarm before the new arrival is in good order for laying.

This has been so strongly impressed upon my mind, that for a long time past I have been experimenting, in the hope that I might ultimately be enabled to dispense with the introducing cage entirely. I am happy to say that I have succeeded beyond my expectations, and the method is so simple that the only wonder is that I had not thought of it sooner. Colonies with fertile workers, or those that have been long queenless without brood (as they are sometimes found in early spring), cause me no trouble whatever, as I can give them a laying queen without her ceasing her work, except for the few moments that she is being transferred from one hive to another. When a queen is sold with a swarm, another can be immediately inserted, and the queen of one colony can be exchanged with that of another without confinement and none of the bees of the respective colonies will know the difference.

It is generally known that the bees of one colony may be united with those of another by alternating their combs, and there is no disposition to fight. Having always succeeded in uniting them thus, I came to the conclusion that a queen on a comb with her own bees and brood, would be taken no more notice of than the others; and this I have proved to be the case by continued and unvarying success. Taken from one hive and placed in another, while parading among her own subjects and without being handled, the queen takes no notice whatever of the change, and thus her unconcerned behavior saves her from any rude inquisitiveness. I have introduced them under all the respective conditions before mentioned, by this means, and I have not met with a single failure; and during the last two seasons I have been saved a large amount of extra work by this method, besides a considerable gain in increase in bees. As soon as the comb, queen, and bees are inserted, the job is done, and I never trouble to look at the hive again until its turn comes in the ordinary course of manipulation.

The foregoing applies, of course, to queens reared in the same apiary when taken from nuclei or other hives with frames all of one size, as should be the case in every well conducted apiary. If a nucleus cannot afford to lose the comb of brood taken with the queen, it is easily replaced by one from some other colony. When queens come from other apiaries, the mode of procedure is slightly different, though a state of things somewhat similar has to be introduced. An imported queen will never lay vigorously for the first few days, therefore it might be said what delay would there be in encaging her? There would be considerable delay if the present laying queen were at once deposed.

To make the most of the queens, first secure as many combs of *hatching* brood as there are queens to be introduced, and after cleaning them of every bee, place each in a nucleus hive with a tight-fitting division board on either side, put the queens in, and close each so that no bees can get out, but give ample ventilation. Now put these nuclei into a moderately warm room for two or three days, when many young bees having hatched, and the queens nearly recovered from the effects of their previous confinement, each nucleus may be stood by the side of the hive its queen is to be introduced to, and the bees allowed to fly for a day or two before being united to the full colony. As soon as the imported queen is laying nicely on her one comb, the condemned queen can be removed and the former inserted (on her own comb with the bees) at one and the same operation, and no notice will be taken of her. By reserving the condemned queen till the moment the other is introduced, the colony receives no check whatever. The single comb is quite enough for the new arrival for nearly a week, as, after her long confinement, she is some days before getting into full laying order. It will be observed that instead of the usual way of allowing the bees to find out their loss, the exchange is completed before they are aware of the occurrence.

I have no doubt many will still cling to the cage, but no advancing beekeeper can afford to lose so much valuable time at the beginning of the season. My experience bears me out in stating that there is absolutely no risk whatever in introducing in this way, even in what might be thought most obstinate cases.

For the American Bee Journal.

Honey Dew Explained.

C. H. LAKE.

Many of the old articles written 40 or 50 years ago, are very interesting to me, and thinking other readers of the Weekly BEE JOURNAL would be edified, I have made such extracts from them as I thought were worthy a place in your valuable journal. I quote one from the *American Agriculturist* of 1844, as follows:

"At a late meeting of the Farmers' Club, at New York, the subject under consideration being insects injurious to vegetation, the Chairman, Ben Johnson, of Long Island, is reported to have said: 'It is my opinion the dew (called, by the Dutch, honey dew) which always falls the latter part of June, always kills off most insects; they uniformly disappear after it has fallen.'"

"Now, since I have embraced the new doctrine of cause and effect in the matter of blight and its consequences, I am led to consider the honey dew merely the extravasated juices of the plant or tree, which, having been for a time in a stagnant and putrid state occasioned by unfriendly atmospherical influence, are at length thrown off by a new circulation of the sap, the effect being the deprivation of food to the insect tribe, which are created for the purpose of feeding on putricity, and hence the cause of their disappearance." (W. FAY, in Boston *Cultivator.*)

The editor of the *Agriculturist* adds: "We have consulted Mr. Browne, who is well versed in matters of this kind, and he regards honey dew, in most cases, as the exudation of plant lice. (*Aphides.*)

"He says, however, that there are saccharine exudations from the leaves of plants and trees, which are not distinguished by the name of honey dew, as the labdanum from the *cestes creticus*, and the manna which exudes from the ash of Italy and the larch of France. There are also analagous productions observable on plants after very dry weather, which Mr. Murray, in his treatise on Atmospheric Electricity, ascribes to an electric change in the air. Mr. Murray also states "that the honey dew was found on plants that were entirely free from plant lice, and so copious was this substance, that had their number been a hundred fold, they could not certainly have been the source of the supply. He supposed that he set the question at rest by washing a leaf and wiping it dry with a sponge; immediately after which he observed, through a lens, that excreted globules were apparent."

But, in this experiment, might not the leaf have been previously wounded, perhaps, by the beak of a plant-louse, and hence the exudation of sap, instead of honey dew? And may not the circumstance of his finding the honey dew on leaves where there were no plant lice, be accounted for on the principle that these insects had left, as they always do, the parts covered with their exudations?

Mr. Sauvages, in the Transactions of the Royal Society, at Montpelier, remarks "that *aphia* (plant lice) are careful to eject the honey dew to a distance from the place where they may may be feeding."

Mr. Burn cites an instance "of a plant of the Chinese chrysanthemum, the young shoots of which swarmed with aphides, and that the leaves below were covered with honey dew. The experiment was tried of wiping it off from a leaf, and no more was formed when it was protected by a piece of paper from the aphides above. Beside, the paper became sprinkled with honey dew in a few hours, and by means of a lens, the aphides were actually seen to eject their fluid."

Dr. Harris, in his report on "Insects of Massachusetts, describes the habits of these insects, as follows: "Plant-lice seem to love society, and often herd together in dense masses, each one remaining fixed to the plant by means of its long tubular beak, and they rarely change their places till they have exhausted the parts first attacked. The attitudes and manners of these little things are exceedingly amusing. When disturbed, like restive horses, they begin to kick and sprawl in the most ludicrous manner. They may be seen, at times, suspended by their beaks alone, and throwing up their legs, as if in a high frolic, but too much engaged in sucking to withdraw their beaks. As they take in great quantities of sap they would soon become gorged if they did not get rid of the superabundant fluid through the two little tubes or pores in the extremities of their bodies. When one of them gets running over-full, it seems to communicate its uneasy sensations by a kind of animal magnetism to the whole flock, upon which they all, with one accord, jerk upward their bodies and eject a shower of the honied fluid."

The fecundity of plant lice is almost incalculable. Reaumur supposed that in one year there may be twenty generations, and he proved, by experiment, that one of these insects may be the parent of 5,904,900,000 descendants during its life."

Latrille says, "one female, during the summer months, usually produces about twenty-five a day, and more than one thousand have been counted on a single leaf of the hop."

Honey dew is in no way regarded as poisonous, but, on the contrary, it is devoured with eagerness by bees, ants, and other insects, and in the forests of Lithuania, this substance and linden flowers afford the finest honey in the world."

Baltimore, Md.

The Transformations of Life.

CHARLES J. BEATTIE.

Though living forces teem with living strife,
All Nature sings one song of deathless life.
Grass, flower, and shrub, and tree of every name—
All living things—a deathless life proclaim.
The tiny song-bird 'mid the boughs and leaves,
Builds its warm nest with skillful ease, and weaves
With bramble, twig, and leaf, its castle free—
A jocund homestead in the growing tree,
To keep its feathered darlings snug and warm,
Safe from the cold and sheltered from the storm.
The restless bee rears its industrious home,
And fills with treasured sweets its honey-comb—
The strange chrysalis that assumes to die,
Rises to life a gorgeous butterfly.
Night's radiant Queen, the everlasting Moon,
Changeful, yet changeless as eternal noon—
The lesser orbs which light the night or day,
The constellations of the Milky-Way,
And every star that shines from pole to pole,
Are sentinels that watch the ages roll.

Chicago, November, 1882.

CONVENTION
NOTES

Local Convention Directory.

1883. *Time and Place of Meeting.*

Jan. 9.—Cortland Union, at Cortland, N. Y.
M. C. Bean, Sec., McGrawville, N. Y.
9.—Ohio State, at Columbus, Ohio.
D. Spear, Sec., Cardington, Ohio.
9-11, Northeastern, at Syracuse, N. Y.
G. W. House, Fayetteville, N. Y.
11, Nebraska State, at Wahoo, Neb.
Geo. M. Hawley, Sec.
16.—Eastern N. Y., at Albany, N. Y.
E. Quakenbush, Sec., Barnerville, N. Y.
18, Champlain Valley, at Middleburg, Vt.
T. Brookins, Sec.
19, 20.—Mahoning Valley, at Berlin Centre, O.
L. Curson, Pres.
Feb. 3.—Northern Ohio, at Norwalk, O.
8.—Maine State, at Dexter.
Wm. Hoyt, Sec.
April 5.—Utah, at Salt Lake City.
E. Stevenson, Sec.
May 11.—Iowa Central, at Winterset.
J. E. Pryor, Sec.
—, —Texas State Convention, at McKinney.
Dr. W. R. Howard, Sec.
Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.
Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Union, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—Ed.

☞The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning Co., O., in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th. L. Carson, *Pres.*

Michigan State Convention.

The 17th annual meeting of the Michigan State Bee-Keepers' Society, was held at Kalamazoo, Mich., on Dec. 6, 7, 1882, commencing Wednesday at 10:30 a. m., Vice President Southard, M. D., in the chair. There was a very fair attendance and those present indulged in a free and easy kind of a talk on various subjects, awaiting the arrival of the trains at about noon, which augmented the number quite considerably.

The chairman said that President Heddon was in favor of proceeding without a programme, leaving those present to suggest subjects which could be accepted or refused by vote of the convention.

Dr. Miller, of Marengo, Ill., said as president of the Northwestern convention he prepared a programme which covered all the points of interest, and was faithfully adhered to. He said that all wanted to know about some point, and he would suggest that slips of paper be handed around for the members to name subjects for discussion.

Dr. Southwick, A. C. Balch and others desired to have topics to be discussed arranged, and a committee was appointed consisting of Dr. Miller, Dr. Ranney, Dr. Southwick, and Mr. A. I. Root, to arrange a programme. Adjourned to 2 p. m.

The afternoon session was called to order by President Heddon, and the minutes of the last annual convention at Battle Creek was read and approved.

President Heddon said that the president's address was first in order but as he believed that discussion would be far better than an address, he would at once proceed to business.

The committee reported a "programme" which was adopted, and the convention proceeded to take up the first topic as follows:

How Shall We Begin to Keep Bees?

Dr. Southwick said he would look about and find the bees that produced the most honey.

Dr. Miller remarked that disaster might be occasioned by the location and not from the kind of bees. He bought his bees of Adam Grimm, who never had a large crop, on account of having a poor location. He had tried the Cyprians, but would not like to say which was best—the Cyprians or the Italians.

A. C. Balch wished to know if the best colony would duplicate itself in its progeny?

A. I. Root did not believe that queens would duplicate themselves.

Mr. Kazartee, of Cicero, said bee-keeping was like farming; one man would do well while others would fail. He had never tried the Cyprians, but believed that black bees made the whitest combs.

Prof. Cook introduced Mr. W. Z. Hutchinson, who had just arrived.

Dr. Miller remarked that he had lots of bare-headed bees, and asked, what shall I do? Pinch the queen's head or let them alone.

A. I. Root had seen such bees, but had noticed no difference in their work

A. C. Balch did not want the bees uncapped by moth millers. Black bees were troubled in this way more than Italians.

Prof. Cook said we should prove all things and hold fast to that which was good. He agreed perfectly with Mr. Geo. Thompson in his speech at the Chicago convention about the new races of bees. Such thoughts were valuable.

President Heddon would advise beginners to get the Italian bees—the light-colored ones are the most gentle, but the leather-colored ones were the best workers.

Prof. Cook: Like others, he would say, if there is a better bee be wanted it.

Dr. Miller could not discover any difference. His Syrians did not reach the average Italians.

The president said that good judges could not tell the difference between Cyprians and Italians; at least one did not when a bottle of Italians in alcohol was produced at the Cincinnati convention, for he said they were Cyprians.

Prof. Cook said Syrians were easily discerned—the queens of the Syrians had bars across the abdomen by which he could distinguish them very readily.

Secretary Bingham gave the Colvin test for pure Italians: that of placing the hand over an open hive of bees and with a sudden jerk, let it fall about 6 inches toward the frames. If the bees were pure Italians they would not be disturbed; if blacks or hybrids, they would at once commence an attack. He thought it a good test of Cyprians also. They would act like the hybrids.

A. I. Root said, at first he could not tell them apart at sight, but he could do so by the amount of brood and their dislike of jars; they were very irritable. The drones are much alike.

Prof. Cook: You can go close to the hive and the Syrians will not interfere with you, unless you molest them; but when thoroughly aroused they will follow you into the house, and even into a bedroom, so intent are they upon stinging.

A. C. Balch said that H. E. Bidwell obtained 216 lbs. of comb honey from one colony of Syrians.

President Heddon said that E. J. Oatman remarked at the Chicago convention that the honey produced by Syrian bees was of inferior quality.

Prof. Cook said he had not noticed that the honey capped by the Syrians was inferior, and would like to know more on that point.

The president said that Mr. Newman, editor of the American Bee Journal, had just come in, and, no doubt, he could give some light on the point as to the value of the honey produced by Syrian bees, in the Chicago market.

T. G. Newman, being called for, said that Mr. Oatman remarked something of the kind at the Chicago convention, and the best he could do would be to read it; as he happened to have a report of that convention in his pocket. He read as follows: "E. J. Oatman: We have found that the half-bloods (Syrians fertilized by Italian drones) gave us the most honey.

The quarter-bloods are no better than others; but these crosses are vicious. One colony of them, at the close of the white clover season, drove me out of the apiary, in spite of smoker, etc. I took them to an outside apiary and shall let them remain there till next spring, when I shall destroy them. They do not cap the honey so that it will look as nice and white as I want. When I put it on the market, it is worth from 2 to 5 cents per pound under price. The bees do not stay on the combs as well as Italians, either. Mr. Gray said that his neighbor, Mr. Miller, had 1,000 pounds of honey in the comb on Water street, and he could take any one and point out all the honey gathered and capped by the Syrians. He agreed with Mr. Oatman. President Miller asked: As they gather so fast, do you not obtain enough honey to more than counterbalance the loss in price? E. J. Oatman: No; it will not make up the loss in price when we market our honey. They are so cross that I do not want them at all."

Dr. Miller said that Mr. Oatman had sent a sample lot of honey to New York, and among it was some honey gathered by his Syrians, and the buyer said he would not take any more of that Syrian honey when he ordered another lot.

T. F. Bingham said he did not think it best to advise the introduction of untested and high-tempered bees.

Small Frames or Sections for Honey.

Mr. Newman said that bee-keeping was progressive, more so than any other pursuit. President Heddon said, at the Chicago convention, that "the ink of a book was hardly dry before the author was at work on a revision"—and it was true. We must keep abreast, if not in advance of the times. The requirements of the trade should be ascertained, and then bee-keepers should supply the demand, whatever it may be. Only a short time ago the 2 lb. section was considered small—now, one holding one pound of honey was the most popular—and when Mr. Ripley, a member of the firm of Crocker & Blake, of Boston, was here, he said that Boston required a smaller section, holding only half a pound of honey. If that is to be the demand, we must supply it.

Dr. Southwick did not object to progress, but he did not think that the section should be smaller than two pounds.

Mr. St. John said that we must educate everybody to eat honey, and a small package was best.

H. D. Cutting said that small sections sold first, and not until they were all gone could you sell the larger ones.

President Heddon said that he had used the 2 lb. sections in one apiary, and the 1 lb. sections in the other, and could not see but the small ones were filled as quickly as the larger ones. He thought of using half pound sections next season, and would have the combs thinner, about the same thickness as brood combs.

T. F. Bingham said that thin combs were better for the table, cut out better and made a better appearance on the plate. He recommended 1½ inches for the sections, and said that when thin foundation was used no separators would be necessary. The demands of the market must be met.

T. G. Newman said that honey was more healthy for the children than confectionery made with glucose; that Solomon knew what he was recommending to the children when he said, "My son, eat thou honey, because it is good." We must popularize the sale and use of honey by tempting the working man to take it home to his wife and children; they need sweets, and honey is the best and most healthy of all sweets for the consumption of humanity. When properly developed the market could not be overstocked with honey. All we had to do was to educate the masses to eat honey—to popularize it, and then the demand would be far greater than the supply.

H. D. Cutting said separators must be used if the sections are not filled with comb foundation.

Dr. Miller said variety was necessary, and if others made smaller sections, he should make larger.

Dr. Ranney: People do not buy the large sections of honey as quickly; nor as many of them as they do the small ones.

Mr. House said that he knew of a dealer in Chicago who had a lot of comb honey in half-pound sections, and he had sold it far more quickly than he could have sold one or two pound sections.

T. G. Newman remarked that he was not an advocate of half pound sections, but if they were used, they should have as large a surface as possible, because they would look more for the money, and the bees would work more readily on them, if they had more surface and less thickness of comb.

A. I. Root said that years ago we talked of a section for 25 cents, now we want one for 10 cents. If we make such they will sell readily. His wife wants the section so small that it is all eaten up at one meal. It is never so good to put back on the table the second time.

T. F. Bingham said that the extra thinness, by using 1½ inch sections, would render the use of separators comparatively unnecessary, as the bees did not often enlarge their combs so as to encroach on the next one, if they are only made of the thickness of the brood combs.

Side and Top Storing.

Mr. Balch had experienced no trouble with eggs in the sections when using sections in broad frames for side storing.

Dr. Miller is a side as well as top storer—uses a frame of brood to decoy the bees up to the sections. He wants to get them over as much ground as possible in the spring, and as little as possible at the end of the season. He had 174 colonies last spring and had only an increase of 28. His honey crop amounted to 16,549 pounds; all comb honey.

Adjourned.

EVENING SESSION.

The convention assembled at 7:30 p. m., President Heddon in the chair.

Dr. Miller was, on motion of Prof. Cook, made an honorary member.

The following committees were appointed:

On Resolutions—Prof. Cook, Dr. Southwick and R. L. Taylor.

On Exhibits—Dr. Haskins, W. Z. Hutchinson and Dr. Miller.

On Statistics—H. D. Cutting, Mr. Kazartee and Dr. O. B. Ranney.

The convention then proceeded to discuss the subject of

Overstocking a Locality.

President Heddon said bees would gather honey profitably about 3 miles, and it was useless to move bees less than 4 miles unless there existed a barrier of trees, rocks, hills, etc.

A. I. Root had 200 in one apiary, one year, when, in July, with clover in full bloom, the bees suddenly stopped gathering.

J. H. Robertson, of Pewamo, usually had 300 colonies in his home apiary, but he thought he was overstocked last year, for there was no honey to gather. He had seen his bees 7 miles away from the apiary.

James Heddon found that east of his apiary bees had not done as well as they had on the west. He was just at the edge of the honey shower.

Dr. Miller wanted to know how to get the greatest aggregate amount from 100 colonies of bees.

Dr. Ranney had tried to manage so as to prevent increase, and obtained much more than his neighbors did, by cutting out queen-cells.

Dr. Miller had kept 120 colonies down to 122.

Prof. Cook had visited D. A. Jones, of Canada, who had 1,000 colonies this year, but no honey, and was feeding them hundreds of barrels of sugar.

Clipping Queens' Wings.

Dr. Miller said that when a swarm comes out, I put back the bees and cage the queen (her wings being clipped she is easily secured). I let them remain 5 days and then cut out the queen-cells; 5 days later I cut out the queen-cells again and let the queen loose in the hive and they do not swarm again. This was usually sufficient to prevent swarming, but this year they came out again in spite of my precaution. The plan I have described is Mr. Doolittle's plan, and I have now practiced a plan of my own, which is as follows: I kill the queen and wait until "piping" is heard; then I cut out the other queen-cells, and take 4 brood frames and put in a super with the new queen and place this on the top of the honey board, leaving the lower hives queenless. Ten days after I cut out all the queen-cells and put the nucleus above, back in the lower story. This has been successful.

President Heddon said he did not believe in cutting the queen's wings; he did not like a part of a queen and did not believe the bees liked her any better than he did.

Prof. Cook could not consent to abandon the clipping of the queens' wings.

W. Z. Hutchinson said by using the extractor freely he could generally prevent swarming.

Mr. Southwick had no success in preventing swarming by cutting out queen-cells.

President Heddon hives the swarm on frames of wired foundation, let them work and after 5 days united them with the parent colony.

Mr. Swarthout hives the bees in a new hive, all but a few which he returns to the parent colony and puts in a young laying queen, and finds that this usually prevents swarming.

Mr. Townsend said that bees did not like to build comb when they were queenless.

Prof. Cook remarked that many extensive bee-keepers thought it profitable to clip the wings of their queens, and for himself he did not see how any one could afford not to do so.

Dr. Miller did not think he could keep bees successfully without clipping the queens' wings.

Adjourned.

SECOND DAY.

The convention met at 9 a. m., and Mr. Cutting, chairman of the committee on obtaining a suitable place for exhibits at the State Fair and obtaining a good list of premiums, reported by request. The report was unanimously received and $20 were allowed for expenses and an order on the treasury for the amount was drawn.

Mr. Cutting said that the State Fair officers were so well pleased with the honey exhibit that they would do any thing reasonable to encourage the bee-keeping interest for the coming year.

Prof. Cook said that we could not do anything that would go farther to popularize honey consumption than to make a large display at the State Fair, and have it sold on the ground, and Mr. Cutting had done his work so well that he would move a vote of thanks to him for the way in which he had managed the exhibit and secured the approbation of the officers of the State Fair.

The election of officers for the ensuing year was then had, with the following result:

President—Prof. A. J. Cook.

Vice Presidents—Dr. A. S. Haskins and W. Z. Hutchinson.

Secretary—H. D. Cutting.

Treasurer—T. M. Cobb.

The secretary's expense account was presented, amounting to $18.47 and ordered paid.

Flint was selected as the place for holding the next annual session, on the first Wednesday after the first Tuesday in December, 1883.

Secretary Bingham was requested to continue his duties during the present session.

President Cook was then conducted to the chair by Mr. T. G. Newman and Dr. Haskins and welcomed by President Heddon.

Discussion was then resumed, and the next subject on the programme taken up, viz.:

Wintering Bees.

W. Z. Hutchinson wintered his bees in a cellar, ventilated by a pipe running underground. With this ventilating pipe the air was kept pure and odorless, and the bees wintered well.

Mr. St. John said that spring dwindling was caused by the bees taking cold and they died of pneumonia.

R. L. Taylor used chaff cushions on each side of the hives, for winter, and was successful.

Mr. Kezartee kept his bees dry with absorbents and they wintered well.

Dr. Ranney packed with 4 inches of chaff and allows no escape of air from the inner hive. He packed the chaff over the cover and around the hive, and they wintered well.

Dr. Southwick uses chaff cushions; the top cushions never get damp if there is an air-space between them and the outside boards. He took off the packing when the apple trees bloomed, and kept the bees from breeding as late as possible.

Dr. Southard found that if any cover of the inside hive, as described by Dr. Ranney, got displaced, the bees in that hive had the dysentery if the winter was very cold.

James Heddon said he could demonstrate that dysentery was not produced by lack of upward ventilation. Cold is not the cause but the aggravation of the disease. He had the best results in packing bees on the summer stands.

Mr. Robertson wintered his bees in a cellar, piled 8 high; water run through the cellar and carried off the gasses, and winters successfully.

Prof. Cook remarked that water in a cellar was a valuable thing. He had a brother who has a cistern in his cellar where his bees are put, and they winter well.

Adjourned.

AFTERNOON SESSION.

President Cook called the convention to order at 1:30 p. m., and the subject of wintering was further discussed.

Dr. Southard weighs all his hives before putting into winter quarters; takes out all poor honey and gives them 25 pounds each to winter on.

James Heddon wanted boxes on for winter, and said, dark honey, if thick, was best for winter.

Comb Foundation.

Dr. Miller liked the Given foundation best.

Dr. Southwick also liked it best.

A. I. Root said rubber plates make the softest foundation, and bees work on it very promptly; next to that was the Given. He used wire woven in the frames and embedded in the foundation.

James Heddon: It pays a good profit to make foundation, and when a man has 50 colonies it will pay him to own a machine or press.

Mr. Taylor likes the Given best; he could put combs in with the press easier than he could fasten other kinds in the frames. Damp days were best for making foundation.

The Committee on Statistics made the following report:

Apiarists.	Number of Colonies in spring.	Number of Colonies in fall.	Comb Honey, lbs.	Extracted Honey, lbs.	Beeswax, lbs.
1	110	140	....	3,000	..
2	185	185	....	....	..
3	26	36	1,500	1,500	25
4	175	280	6,000	5,000	..
5	6	17	50	650	5
6	3	27	32	72	..
7	30	80	600	100	..
8	19	40	200	1,000	..
9	16	30	200	500	..
10	60	70	400	2,600	..
11	80	75	50	500	..
12	3	12	170	80	..
13	40	64	1,150	150	..
14	17	46	1,513	....	..
15	5	7	20	300	..
16	75	135	2,000	2,000	..
17	50	110	300	4,100	..
18	26	46	....	276	..
19	55	107	....	3,200	..
20	16	45	100	....	24
21	36	70	700	300	..
22	52	78	....	1,040	..
23	4	19	200	50	..
24	4	17	300	....	..
25	25	100	....	900	..
26	14	32	2,000	1,000	..
27	15	21	58	108	..
28	24	37	1,325	50	..
29	38	81	950	400	..
30	25	65	....	1,200	..
31	50	75	....	600	..
Total	1,284	2,147	19,818	30,676	54

The reports given, show an increase of 863 colonies, or about two-thirds of the spring number.

The wax was included in the report of but three persons, while one or two reported a good business in the rearing and sale of queens.

Respectfully submitted,
H. D. CUTTING,
O. B. RANNEY.

The report was accepted and the committee discharged.

T. F. Bingham gave the result of his experiments with the cappings. When converted into wax, it took 60 lbs. of cappings to make 30 lbs. of wax, or about 10 lbs. of wax from the uncapping of 3,000 lbs. of sealed honey.

Pasturage for Bees.

Dr. Miller has sowed sweet clover in buckwheat, and should sow it again next year so as to have a continuous crop.

Julius Tomlinson had sweet clover near his foundry and it had re-seeded itself for 10 years and grew thicker; had sowed some about trees, but very little came up.

Dr. Miller said he would sow a few acres of sweet clover if he was sure it would pay as a honey plant or otherwise.

Prof. Cook said it would grow well on sandy soil.

Dr. Miller said that a farmer in Wisconsin had found sweet clover of value as feed for cows.

Julius Tomlinson said his cows would eat it.

J. H. Robertson said figwort was always sought after by bees, while sweet clover was sometimes neglected by them. His sweet clover grew on clay soil. Alsike clover was his pet pasturage for bees.

Dr. Miller: It failed to grow on my soil.

Dr. Southwick sowed alsike with other clovers and it did better than when sowed alone; it made better hay. He should sow 13 acres next spring with timothy, for bee pasturage and hay.

Julius Tomlinson thought it would pay to give seed to farmers.

A. I. Root had great faith in alsike; it should be cut just as it began to bloom, in order to get the best results in a honey crop, at the season when it is needed, just after basswood and clover.

Dr. Southard said he sowed sweet clover and his man cut it with the oats, but some of it grew and the bees worked on it till fall.

James Heddon said bees do not get honey from plants that bloom out of season.

Prof. Cook: Rape will prove to be a good honey plant; sow it 4 weeks before you want it to bloom.

Mr. Townsend: No honey plant will yield honey under all conditions.

Dr. Ranney: Buckwheat will yield honey only now and then; not every year.

Prof. Cook: Texas horsemint is not the same as our bergamot.

Adjourned.

T. F. BINGHAM, *Sec.*

☞ The Nebraska State Bee-Keepers' Association, will hold its annual session in Wahoo, Saunders county, Neb., commencing Thursday, Jan. 11th, 1883. Arrangements have been made with the railroads to secure 1¼ fare for the round trip. The Saunders county Bee-Keepers' Association will furnish entertainment free to all visiting apiarists. Bee-keepers from neighboring States will be welcomed.

T. L. VONDORN, *Pres.*
GEO. M. HAWLEY, *Sec.*

☞ The Ohio State Bee-Keepers' Association will meet in Columbus, in the rooms of the *Ohio State Journal*, on Tuesday and Wednesday, Jan. 9 and 10, 1883. A full attendance of members, and all interested in bee-culture, is requested, as matters of interest and importance will be discussed.

DR. H. BESSE, Delaware, O., *Pres.*
DANIEL SPEAR, Cardington, O., *Sec.*

☞ The annual meeting of the Cortland Union Bee-keepers' Association will be held in Cortland, N. Y., on Tuesday, Jan. 9, 1883.

M. C. BEAN, *Sec.*
McGrawville, N. Y.

Read at Maine State Convention.

Wintering and Springing of Bees.

O. L. SAWYER.

The successful wintering and springing of bees is a subject of vast importance to every bee-keeper. While one comes out in the spring with flying colors, his neighbor meets with heavy losses. One may winter one season with good results, the next winter his bees may come out in bad shape. As we never have two winters or two seasons exactly alike, it is quite difficult for one rule to apply to the various conditions in which bees are kept.

The causes of bees not wintering well are numerous and great. In the last fourteen years, during which I have been keeping bees, my experience has been of a decidedly mixed nature. Not having a first-class cellar I have tried various ways, some winters meeting with good success, and at other times coming out in bad shape. It has been my experience that there are some colonies that it is almost impossible to winter. One season I attempted to winter two colonies of Italians; one came out the 29th of July, the other the 20th of August. They both gathered sufficient stores to carry them through the winter, but in less than ten days after I had put them in my building they became quite uneasy and began to have a very bad smell. I gave them more ventilation, but it did no good; and at last I set them out doors, the temperature being below zero, hoping to quiet them down, if nothing more. But it had but little effect and in a few days they were dead. I think that there might have been disease or poor honey that caused it. I kept the hives and comb till the next year, putting new swarms in them, and they wintered as well as any that I had. The cause of this queer freak I never could give any reason for, excepting that it is something a little natural to the Italian bees, having had several such cases in a light form.

A great many attempt to winter colonies that are perfectly unfit to stand the test of our long and cold winters, starting with too few bees or without sufficient stores. Last winter I attempted to winter some fifteen colonies, that came out in August, they having quite enough to carry them through, but the honey was on more frames than it should have been. I put them in the cellar and they did as well as any of my strong ones until about the 1st of March. At that time they had eaten the honey out of the combs on which they clustered. Then came the trouble. As soon as they had to change their position for stores they would sicken and die. The placing of comb honey on the frames over them seemed to have no good effect. Had I succeeded in getting them safely through the winter it would have been impossible to have carried them through such a spring as our last. Bees to winter and do well the next season, should first have a young and healthy queen, with a plenty of bees not too old. Second, twenty to thirty pounds of nice honey or sugar syrup. This must not be scattered through the hive, but must be as nearly in one solid mass above the bees as possible.

A great many bees die in the spring by getting away from their stores. This fall, while traveling in Aroostook county, I found men who had had varied success. G. W. P. Jerrard, of Caribou, told me that he could keep his bees in the cellar six months, and bring them out in good shape in the spring; having lost scarcely any last winter of his one hundred and thirty; while Mr. Oliver Ames, of Fort Fairfield, having one of the finest cellars that I ever saw, lost fifty out of ninety colonies, last winter or spring. Other men have wintered bees well in the cellar, but such a spring as our last was a hard one to get by.

Not having a cellar satisfactory to my mind in which to winter fifty colonies, some six years ago, I put up a building for the purpose, having it nicely ventilated, with the walls thick enough to keep the bees at a proper temperature. It seemed as if this was all one could wish for, but while I could winter fifty colonies successfully one year, the next I would lose a greater portion of them; and those that came out well, would dwindle away in the spring. This having been unsatisfactory, I have, in the meantime, packed a few on their summer stands, with better results; it seeming to be more natural, and the long, cold springs not having so much effect on them as those wintered indoors.

My manner of packing is to build up around them on three sides, leaving the front open, exposed to the sun. I fill in on the three sides with leaves or planer shavings, covering the top the same as the sides. I then shingle the roof and all is done until next June; the time I consider that winter has ended. I shall winter the most of my bees as above stated this season.

☞ The annual meeting of the Champlain Valley Bee-Keepers' Association will be held at Middleburg, Vt., on Thursday, January 18, 1883, at 10 a. m. T. BROOKINS, *Sec.*

The North Eastern Bee-Keepers' Association will hold their thirteenth Annual Convention in the City Hall, at Syracuse, N. Y., on the 9th, 10th and 11th days of January, 1883.

Business of great value to every bee-keeper in the State will be brought before the meeting. Every member is requested to attend and bring their friends, that all may be benefited by the action there taken.

The question drawer will be opened each day, and questions answered and discussed. All are invited to send questions. Appropriate diplomas will be awarded to successful exhibitors of implements, etc. Let all attend.

GEO. W. HOUSE, *Sec.*

☞ Attention is called to our *new* and liberal advertising rates for 1883.

SELECTIONS FROM OUR LETTER BOX

Facts About Bees.—A knowledge of some facts familiar to bee-hunters will aid any one who may propose to repeat Sir J. Lubbock's experiments quoted on page 738 of the last number of the Bee Journal. Bees cannot be induced to work freely on honey when honey-bearing flowers are in bloom. A single bee may continue for hours to carry to the hive the honey it has found and finally stop without having any companions. The case is very different after frosts have ended the natural honey harvest. Then, if on a bright, warm day a stray bee can be caught ranging the fields and allowed to quietly fill itself with honey and depart without alarm, by the time it has made a second return, if not before, it is almost sure to be accompanied or preceded by other bees, even if the hive is a mile or two away. I presume the experiment might also be made successfully in warm days of early spring. It is the opinion of many who have hunted wild bees that bees do find their way from the hive to the honey without accompanying a bee who knows the way, but I have never observed any fact to positively sustain the theory and it is very improbable.

W. Bradford.

Louisville, N. Y.

[Sir John Lubbock's experiments were made in England, where bee pasturage is very limited and can not be compared to that found in America. Some of his experiments were no doubt made when the honey harvest was in its height, and this may have given an erroneous conclusion to some of his experiments. But his book is very interesting to the student.—Ed.]

Good!—From 16 colonies, spring count, I took 1,710 lbs. of comb honey in 1 pound sections. Long life to the Bee Journal. I hope you will never come in contact with my "Coming Bees."

James Ronian.

Villisca, Iowa, Dec. 1, 1882.

Lime for Wintering.—I have just read the article by F. Della Torre, in No. 46 of the Bee Journal, and agree with him, although I have no acquaintance with the gentleman. I am surprised that others do not see the advantages lime presents over all other *modus operandi*. I have read, in the Bee Journal, all the methods of wintering that have been published, and his is the first mention of the true method. The lime cushion can be applied to almost any hive, either under, over, or at the side, effectively. It is a common sense and scientific protection. It absorbs all the moisture and gives some heat. Mr. S. Corneil sounds the key note as to the cause of dysentery, when he says in the Bee Journal, No. 46, page 728, "that bees, when clustered, can endure severe cold, but cannot stand dampness." It is plain that if the air, heated by the bees, be overloaded with moisture, the large amount of water generated by the consumption of honey will not be inhaled by evaporation from the respiratory membrane, but will remain in the bees bodies, and if this condition of the air be long continued, it is sufficient cause of dysentery. I only have 12 colonies, but I am as desirous of saving them through the winter as though I had a thousand. I have no axe to grind and give my opinion for what it is worth, as I have used the lime and know whereof I speak.

Dr. J. C. Oldham.

Springfield, O., Dec. 3, 1882.

Poor Honey for Winter Use.—Having 8 colonies of bees which have not swarmed the past season (and I can not hear of one which has in this vicinity), and none of the bee-keepers here have obtained more than 10 lbs. of comb honey (and some none) and that very dark and slightly offensive, last spring being very cold and the summer the driest we ever experienced, I write to inquire if their store of honey is judged safe for their winter food? If not, should it be taken from them or may sugar be fed to them and let them take their choice? I have packed them so heavily in dry sawdust as to require nearly two feet of inlet which is 1x3 inches. Is the length objectionable?

L. H. Merritt.

Hartland, Vt., Nov., 1882.

[The honey may or may not be safe winter feed—we cannot tell unless we knew more of its quality. Sugar would be safe, if made into a syrup, as often stated in the Bee Journal. There is nothing objectionable about a passage way of even 2 feet for bees entering a hive, except the time taken to travel it. We have seen several as long or even longer in observatory hives at Fairs. We fear you have wasted packing-boards in using so liberal an amount of sawdust.—Ed.]

Old Fogy Bee-Keepers.—I have 50 colonies of Italian bees; my neighbor has about the same number with the exception there is very few Italian bees within several miles. We are greatly annoyed with old fogy bee-keepers who will not Italianize or even transfer to movable frames or take a bee paper of any kind. Let me give an instance of this. One of these (an old neighbor of mine) who boasts of having kept bees for 30 years, and who has heretofore stated that he knew all about bees that is to be known. In conversation with him a few days ago in relation to queen-rearing and cell-building, he asked me how they got the eggs from the queen to make the queen cells, and when I informed him how it was done, he said, "oh, yes, that would do; I thought they had to take them out of the queen," evidently thinking the best queen in the apiary had to be sacrificed to get a few eggs. This is too good a joke to be lost; let us have it in the Bee Journal for the benefit of others who think "what they don't know is not worth knowing," and as a sample of the gross ignorance and innocence of "old fogies."

Henry Large.

Whigville, O., Nov. 20, 1882.

My Report.—I commenced in the spring with 100 colonies; increased to 173 by natural swarming. I obtained 15,000 lbs. of comb honey and 500 lbs. of extracted. I now have 170 colonies in winter quarters, with plenty of honey and bees. I winter in a cellar and bee-house.

H. F. Putnam.

Galesburg, Ill., Dec. 4, 1882.

Poor Honey Season.—We had a poor season here for honey. From 30 colonies in spring, I received 500 lbs. of comb honey and 400 of extracted, besides 90 swarms and nuclei.

Holt, Mich. John L. Davis.

Snow, and Upward Ventilation.—Will it be detrimental to bees to have snow drift over the entrance? When the hives are packed with chaff, on the top, must I keep more top ventilation when the thermometer is below zero, than when it is 40 degrees above?

Nineveh, Ind. W. D. Smyser.

[Snow is not detrimental, if it is not permitted to thaw and freeze and run down over and close up the entrance. If a board is slanted over the front, to protect the entrance, the snow is a protection against the cold.

The chaff packing will give sufficient ventilation at any time in winter; it should not touch the outer cover, however, or it may become frozen in severe weather. An air space, above the chaff, is an advantage in keeping out the cold as well as allowing the moisture to escape, leaving the chaff-packing dry. Too much ventilation is conducive to dysentery. The heat should not be allowed to escape from the cluster.—Ed.]

Spring Dwindling.—Last spring I had 64 colonies of bees, all in good condition, which dwindled down until I had only 48 left. On May 24th they were in good condition at which time I first noticed drones. A cold storm, June 7-9, came on and killed all the drones; all the stores were exhausted and there was nothing coming in from the fields. About Sept. 1, they began to gain. I had but two natural swarms, one of which got away. I have increased by artificial swarming to 66, but have only obtained about 300 lbs. of comb honey and 400 of extracted.

J. G. A. Wallace.

Brighton, Ont.

A, No. 1.—I have found the American Bee Journal to be "A, No. 1," as an advertising medium, and I shall, of course, advertise, during the coming year, in both the Weekly and Monthly editions.

E. T. Flanagan.

Belleville, Ill., Nov. 27, 1882.

OLDEST BEE PAPER IN AMERICA
THE AMERICAN
BEE JOURNAL
ESTABLISHED IN 1861

ADVERTISING RATES for 1883.

20 cents per line of space, each insertion,
For either the Weekly or Monthly Editions.

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For the Weekly alone, 20 per cent. less than the above rates. On yearly advertisements, payments may be made quarterly, but must be in advance.

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THOMAS G. NEWMAN,
925 West Madison Street., **Chicago, Ill.**

Special Notices.

☞ A few of our subscribers are in arrears for the present year—having requested us to continue, and they would pay soon. Will all such please take this as a request to send on the two dollars with a renewal for next year, if possible.

◆

☞The American Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

New Premiums for 1883.

As the season for reading has now arrived, we hope that each of our subscribers will endeavor to send at least one new subscriber for the Weekly BEE JOURNAL for 1883 and thus not only help on the cause of progressive bee-culture, but assist in sustaining the only Weekly bee paper in the world.

Providence has smiled on the bee-keepers during the past season, and as a general thing they are abundantly able to procure a good assortment of bee-literature.

In order to encourage every one who keeps bees, be they few or many colonies, to thoroughly read the many very interesting books on bee-culture, now published, we have determined to make liberal offers, which will be available until January 1, 1883, as follows:

To any one sending us $8 for any books they may select from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for one year.

To any one purchasing $4 worth of books, selected from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for six months or the Monthly for one year.

Any one sending us a club of **two** subscribers for 1883, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers. The Weekly will contain all that the Monthly does, besides twice as much other matter.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

◆

Subscription Credits.—After sending subscriptions to this office, we would respectfully ask every one to look at the label on the wrapper of the next two papers, and there they will find the credit indicated thus: Those who have paid for the first six months of next year will find "June 83" after their names. Those who have paid for the whole year will find "Dec. 83" on their papers. The credit runs to the *end* of the month indicated. If the mark is "Dec. 82," it means that the subscription is paid until the end of the present year. Please remember that the credit given on this label is a sufficient notification of subscriptions due and receipt for payments made. If not so indicated within two weeks after sending money to us, you may be sure something is wrong, and should write to us about it. It will save annoyance and trouble if our subrcribers will give this matter due attention.

◆

☞ The time for the usual winter rush of correspondence is here, and we wish to impress upon all our patrons the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address that we already have on our books.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

☞ The BEE JOURNAL is mailed at the Chicago postoffice every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

☞ Articles for publication must be written on a separate piece of paper from items of business.

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

☞ Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., December 11, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The supply of extracted honey is fully up to the demand. My quotations are: 7c. for dark and 9c. for light, delivered here.

BEESWAX—It is quite scarce. I am paying 27c. for good yellow wax, on arrival; dark and off colors, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—Demand is good for extracted honey by the barrel for manufacturing purposes and for table use. The demand is very good for honey in 1@2 lb. jars. A good deal of comb honey could be sold if we had a good article at a rate within the views of the consumer; *i. e.*, which could be sold at 20c. in the jobbing way and 25c. at retail.

We pay 7@10c. for extracted, and 16@20c. for good comb honey in sections

BEESWAX—Is in good demand at 20@27c. per lb. on arrival. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey does not keep pace with the receipts. There is a large surplus on this market at present, and prices are from 2 to 3c. lower than last month.

We quote: white comb honey, in 1@2 lb. sections, 17@18c. Dark comb honey, hardly any demand. It is held at 12½@15c. Extracted—White brings from 9@10c.; dark, 8@9c.; kegs, half-barrels and casks bring about same price.

BEESWAX—Choice Yellow, 30c.; dark to medium, 18@25c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—A sailing vessel this week took 1,018 cases for Liverpool from a packing house. The market is quiet. Such qualities as are in good supply, dark and medium, are in poor demand.

White comb, 18@20c; dark to good, 12@15c; extracted, choice to extra white, 9@10c.; dark and candied, 7½@8½c.

BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dull. Comb, at 16c. for large or hard to 18@20c. for choice bright in small packages; extracted at 8@9c.; strained, 6½@7c.; choice, in smaller quantities, brings more.

BEESWAX—Prime bright steady at 26@27c.

R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY—There has been no change in honey the past week. No. 1 white, in 1 ℔ sections, continues in good demand at 21@22c. per pound. No. 1 in 2 lb. sections, is also in good request at 19@20c. Second grade, less active, at 1@2 cents ℔ lb. less. Extracted, in all shapes, was dull and very little sale. Some Louisiana honey, rather dark, in barrels,, was sold at 9c.

BEESWAX—Prime quality, 25@28c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is a fair demand, but mostly for small lots, and the general tone of prices remain steady.

We quote: White clover, first quality, 1 ℔ boxes, 25c; 2 ℔ boxes, 23@25c.; second quality, 20c.; buckwheat, 1 ℔ boxes, 20c.; 2 ℔ boxes, 16c.

BEESWAX—30@32c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—30c.

CROCKER & BLAKE, 57 Chatham Street.

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal, ...	$2 00..	
and Gleanings in Bee-Culture (A.I.Root)	3 00..	2 75
Bee-Keepers' Magazine (A.J.King).	3 25..	3 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A.G.Hill)......	2 50..	2 35
Kansas Bee-Keeper.......	2 60..	2 40
The 6 above-named papers.......	6 35..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly Bee Journal.....	2 75..	2 50

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

☞ Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

☞ The result of the election has proved a grand success, but not more so than Kendall's Spavin Cure is proved to be every day. 48w4t

Holiday Presents are annually sought for. But it is often difficult to find appropriate and inexpensive articles of real value, that will be kept, used and appreciated by a friend. Among these we would make favorable mention of the Noyes Dictionary Holders and Noyes Handy Tables. Apply to L. W. Noyes, 99 West Monroe St., Chicago, for an illustrated circular and greatly reduced prices.

SWEET CLOVER SEED.—New and clean, 25 cts. per lb. BEN CLENDENON, Grinnell, Ioa
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MARTYR PRESIDENTS.

Abraham Lincoln, "From Pioneer Home to White House," and **James Abram Garfield,** "From Log Cabin to White House." In English and German. Illustrated with fine steel engravings. By an eminent author. Also, for the **ONLY large steel portrait of Garfield.** Send for **extra terms.**

THE HENRY BILL PUBLISHING CO.,
50w8t NORWICH, CONN.

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THE NEW REMINGTON CARBON PLOW,
BEST IN THE WORLD.

Mowers, Hay Tedders, Horse Hay Rakes, Spades, Shovels, Scoops, Steel Rakes, Forks and Planters' Handled Hoes.

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48w4t Ilion, N. Y.

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This great American journal of agriculture and stock ranks among the first in the United States, and is the only one published west of the Missouri river and right in the heart of the finest agricultural lands in the West. Thousands of people are looking for homes in the West, and at the same time have no means of getting a correct knowledge of the country. The NEBRASKA FARMER furnishes the desired information and only costs $1.50 per year. O. M. DRUSE, Editor,
48w3tx Lincoln, Neb.

FLORAL INSTRUCTOR now in its **third year,** has been enlarged to 28 pages. Monthly.

THE INSTRUCTOR is in magazine form with an attractive cover. It is printed from **new type,** on excellent paper, and is sold for **50 CENTS A YEAR, with Seeds, Plants, Etc.,** as premium. Extra inducements to club raisers. **Specimen Copy FREE.** Address

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with good young Queens Give me a call, friends, and I will try and please you. (Box 819)

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The latest improvement in Foundation. Our thin and common Foundation is not surpassed. The only invention to make Foundation in the wired frame. All Presses warranted to give satisfaction. Send for Catalogue and Samples.
1w1y **D. S. GIVEN & C.,** Hoopeston, Ill.

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A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—Sent on receipt of price, by

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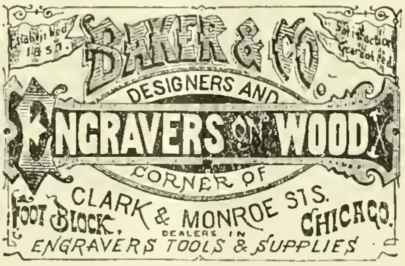

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The BRITISH BEE JOURNAL is published monthly, and contains the best practical information for the time being, showing what to do, and when and how to do it. It is edited and published by

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☞ For sale at the BEE JOURNAL Office. ☜

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Management of an Apiary for Pleasure and Profit; by

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It contains 160 profusely illustrated pages, is "fully up with the times" in all the various improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey bee, and at the same time produce the most honey in its best and most attractive condition. Chief among the new chapters are "Bee Pasturage a Necessity," "Management of Bees and Honey at Fairs," "Marketing Honey," etc. Price, bound in cloth, **75 cents;** in paper covers, **50 cents,** postpaid.

925 W. Madison Street, Chicago, Ill.

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Carefully prepared for beginners.—Farmers Cabinet, Amherst, N. H.

A very valuable work to those engaged in bee-raising.—News, Prairie City, Iowa.

We advise all who keep bees to send for this excellent work.—Journal, Louisiana, Mo.

Its chapter on marketing honey is worth many times its cost.—Citizen, Pulaski, Tenn.

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A neat and abundantly illustrated hand-book of apiculture.—American Agriculturist, N. Y.

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A valuable work for all who are interested in the care and management of bees.—Democrat, Allegan, Mich.

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The engravings are fine. It is gotten up in the very best style, and is cheap at the price.—Farmer, Cleveland, O.

It comprises all that is necessary for successful bee-culture, save experience and good judgment. —Daily Republican, Utica, N. Y.

A manual, containing all the newest discoveries in the management of these little workers.—Plain Dealer, St. Lawrence, N. Y.

Full of practical instruction, that no one who contemplates keeping bees can do without.—Farmers' Journal, Louisville, Ky.

Gives minute details for the management and manipulations necessary to make bee-keeping a success.—Col. Valley and Farm.

It embraces every subject that can interest the beginner in bee-culture. The engravings perfectly illustrate the text.—Farm and Fireside, Springfield, O.

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Owing to the large advance in the price of wax, I now quote prices thus : Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

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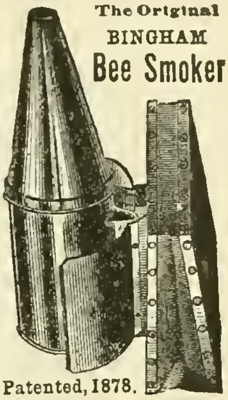

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To sell again, apply for dozen or half-dozen rates.

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Dzierzon Theory;—presents the fundamental principles of bee-culture, and furnishes the facts and arguments to demonstrate them. **15 c.**

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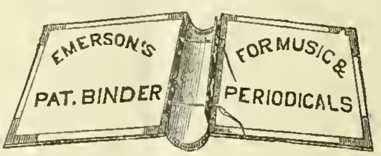

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TOPICS PRESENTED THIS WEEK.

Editorial—

Editorial Items.. 801
New York Honey Market.................................. 801
Half-Pound Sections for Honey........................... 802
Clubbing List.. 813

Among Our Exchanges—

Bees Putting Beseigers to Fight.......... 803
Bee-Keeping as a Business.................. 803
Do Bees Hear?.............................. 803
Honey Exhibits at Fairs.................... 803

Correspondence—

The Sunflower for Honey.................. 804
Non-Swarming Strains of Bees............ 804
Honey and Money......................... 805
Another Instance of Old Fogyism......... 805
Dry Clover Chaff for Packing Bees........ 805

Convention Notes—

Convention Notices........................ 806, 809
Local Convention Directory.................. 806
The Rearing of Good Queens.................. 806
Bee-Keeping—Past, Present and Future.. 807
Bee and Honey Show at Toledo, Ohio..... 808

Selections from Our Letter Box—

Bees on Shares, Honey Comb, etc.......... 809
The Season's Work......................... 809
From Geneva, N. Y......................... 810
Experience of a Beginner.................. 810
Troubled with Moth Worms.................. 810
Hard on the Bees.......................... 810
Prolific, but Dark and Cross.............. 810
The Coldest Day of the Year............... 810
E. Doty's Report for 1882................. 810
More Apiaries Than One.................... 810
Wax from Cappings......................... 810
Success to the Bees....................... 810
C. Thielman's Bee House for Winter..... 810
Stone Platform for Hives.................. 811
The Season's Operations 811
Best Honey Crop in 10 years............... 811
Do Bees Pay?.............................. 811
Excellent 811
Have Done Well............................ 811
Progress in Bee-Keeping................... 811
Packed in Chaff........................... 811
Large Increase............................ 811

New York Honey Market.

In the *Bee-Keepers' Magazine* for December Mr. King inquired why the quotations given by Mr. D. W. Quinby, honey dealer of New York, to the *Magazine*, did not agree with those he sent to the BEE JOURNAL. We replied in No. 49, page 771, that we received from Mr. Quinby, the "New York Price Current," every week, and copied the honey quotations *verbatim*. We also wrote to Mr. Quinby, asking him for an explanation why the quotations were so different. He replied as follows:

DEAR SIR:—The "New York Price Current" is published for the accommodation of all marketmen; the editor goes around and gets quotations from different dealers and they strike an average of the whole. I give my own quotation; they (other dealers) do not get the prices, and do not quote it so high. I will mark my own quotations on "Price Current" hereafter.
D. W. QUINBY.

We have written to Mr. Quinby that we want his own quotations, hereafter, and he has promised us to give them, in all future reports of the New York honey market sent to us.

Mr. King has our thanks for calling attention to the matter. Relying upon the quotations received every week, we had not compared them with any others, and had not, therefore, noticed any discrepancies. Each dealer reporting the "Honey and Beeswax Market," is entirely responsible for his own quotations. We will do all in our power to have them correct, but do not hold ourselves responsible for their correctness, nor endorse either the dealers or their methods of doing business.

☞ One more number of the Weekly BEE JOURNAL will complete the second year of its weekly issue, and we are assured that its readers are well satisfied with it. Had we any doubts, they would be dispelled by the hundreds of encouraging letters we are receiving, with the renewal of subscriptions for the coming year. The complete volume contains 816 pages, making a very large book; and both in *quantity* as well as quality it is enough to satisfy the most economical of its patrons.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but should be written on separate pieces of paper.

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

☞ Attention is called to a few changes in our clubbing list for 1883, as given on page 813. Those interested will please take notice.

☞ On account of Christmas coming on our regular day for printing, the BEE JOURNAL will be one day late, next week.

Half-Pound Sections for Honey.

At the Michigan State Convention the subject of putting up comb honey in sections containing only a half-pound was considerably discussed. It will be remembered that Mr. Ripley, of the firm of Crocker & Blake, honey dealers, of Boston, Mass., who visited the Bee Journal office last September, then remarked that in the Eastern cities comb honey was required in still smaller packages than those containing one pound. It has also been discussed at some other conventions, and several of our most enterprising bee-keepers have determined to put up some of their crops of comb honey next year in sections containing but one-half pound.

Mr. James Heddon, of Dowagiac, Mich., intends to adopt some of these small packages, and announced that intention at the convention in Kalamazoo, two weeks ago. Dr. C. C. Miller has, by request, been figuring out the proper size for such a section, and thinks about 10 to a Langstroth broad frame will be about right in size. Mr. T. F. Bingham stated, at the same convention, that a good plan to determine the right width of comb necessary to use a 4¼x4¼ section, was to shave down some honey that was candied, until the proper thickness was ascertained, to make the right weight. We requested him to make the experiment, and have received the following from him concerning his experiments:

PENNY PACKAGES OF HONEY,

OR "THE SECTION OF THE FUTURE."

Agreeably to request, I have made a few measurements, to ascertain at what thickness comb honey could be made, so that a 4¼x4¼ section would weigh one-half pound.

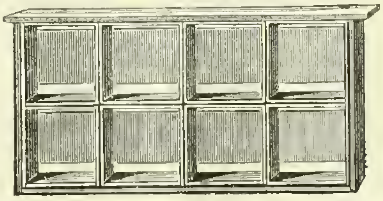
The result is, three-fourths of an inch. Such honey would cost the producer more than if the sections were thicker—as such a section would cost the same essentially as if it held one pound. The expense of foundation for 100 pounds would be more also. These two items are all that I now see that militate against their use.

They would meet the wants of the market in the cities and larger towns, and find an unlimited sale everywhere. One such piece would supply any moderate sized family with a much coveted luxury for tea, at a moderate cost. I need not say how nicely it would cut for the plate. It would be simply "too fine." It would cut twelve pieces over one inch square, or nine a little larger. Some might think this too small a piece, but it would be ample for anyone in my family, or any other that has honey always on the table, and it is reasonable to presume that with such comb honey, few families would be long without it. It would largely take the place of canned fruit, as it would compete in price and economy, and avoid the risk of lead and tin poisoning, and stale fruit.

To the producer there are some points to balance the extra expense.

1. It would ship with perfect safety.
2. No separator would be needed.
3. Twice as many bees could be engaged in lengthening the foundation.
4. It would ripen faster and better. No watery caps would be on such combs.

I am aware that many producers would prefer, before trial, thicker combs, and sections of smaller dimensions, holding the same weight of honey, but such combs would be like all other combs of greater thickness, the cells would not be made at right angles with the septum. It is well known that deep cells always incline upward, while cells designed for brood or short cells are always straight. This is one reason why their combs cut without much dripping or waste.



Broad Frame holding eight half-pound or pound Sections of Honey.

I have taken 4¼x4¼ sections, preferably, on account of the fact that those who have used them would not be compelled to materially change their supers or crates. Other forms might be desired and, perhaps, would be more beautiful. Art has favored rectangles measuring in width ⅝ the length or height, as most desirable for pictures and paintings. The same might be true of comb sections. For such as would prefer different forms, I will give, as the weight of one ½ pound of honey, the measure of the same in cubic eighths of an inch, viz., about 4992. The section would be 4¼x4¼ in. by nine-eighths wide outside.

T. F. Bingham.

Mr. Bingham, in the above article, gives some very strong reasons for retaining the size of section as it is now used for the one-pound, 4¼x4¼, but, of course, having the combs much thinner, and dispensing with separators.

Mr. A. I. Root, editor of *Gleanings in Bee Culture*, in a private letter to us on the 12th inst., says he prefers them "six across a broad frame and two deep," and then adds: "this will be right for the half-pound sections, according to my mind, at present."—Also, in reply to a query of ours, since meeting him at the convention at Kalamazoo, he remarks: "I do think conventions are great promoters of acquaintance and fraternal feelings among bee-keepers." To this let us add, "and ascertaining the requirements of progressive apiculture and taking measures to adopt them."

Whatever may be demanded of us in the manner of marketing honey, we must cheerfully and readily adopt, and we are often much better qualified to judge of the practicability of the methods to be employed, after having thoroughly discussed the matter "in convention assembled."

If the half-pound sections are made the same size as the one-pound, viz.: 4¼x4¼, they can be used in the "super," similar to the Heddon surplus arrangement, without any alteration. There are very many good reasons for adopting that size, and if there are serious objections, let those who discover any disadvantages, state them in the Bee Journal, so that a wise decision may be arrived at.

Some years ago, Mr. Bingham gave an amusing address at the Michigan State Convention, on "Penny Packages for Honey," which, though it was then but a fanciful pleasantry, clearly foreshadowed the coming demands for marketing honey in very small packages. Then, "six-pound boxes" were the popular packages for comb honey, even with Mr. Bingham, if we mistake not; and large barrels, containing from 500 to 800 pounds, for extracted honey, at wholesale, and glass jars at retail, were thought "just the thing."

The small sections of enticing comb honey, and beautiful little pails of extracted honey, have driven the glucose-honey peddlers to the wall, and no less than two of these larger houses, running scores of wagons in this city, have already gone out of the business; and now we hear that four more of the smaller fry, running 6 or 8 wagons each, will close up their business at the end of this year. There can be no doubt but that the small packages of pure honey have done more to kill off the adulterators of honey than anything else could have done.

Time was when the two-pound section was considered too small to suit the ideas of apiarists, but now even those containing one pound are voted to be too large. Truly, apiculture *is* progressive—advancing quite as fast as any other pursuit.

Any step that will aid in popularizing the consumption of honey, and bring it into *universal demand* will be welcomed by apiarists everywhere,—no matter if it be a half-pound section for comb honey, or a five cent pail for the extracted.

AMONG OUR EXCHANGES.

MISCELLANEOUS.

Bees Putting Besiegers to Flight.—The London *Times* "Beemaster" gives amusing instances of the application of bees to defensive purposes:

A privateer manned by fifty men, but having on board some hives of bees, was pursued by a Turkish galley, manned by 500 seamen and soldiers. When the latter came alongside, the crew of the privateer mounted the rigging with their hives, and threw them upon their foes, who, astonished at this novel mode of warfare, hastened to escape from the fury of the enraged bees. Another instance occurred, when a rabble at Hohnstein, in Hungaria, attempted to pillage the house of the parish minister; he caused some beehives to be thrown among the mob, who in consequence soon dispersed. Again, Vauban relates how bees played an important part at the siege of Chatte, in Lorraine. After a siege, the town was being stormed, and, during the assault, the besieged threw a few hives of bees upon the heads of the storming party. The little creatures stung the besiegers so dreadfully that they had to retire; and the historian tells that "the bees were not the least cause of the siege being abandoned."

Bee-Keeping as a Business.—The Saginaw, Mich., *Evening News* of Dec. 4, contains the following on this subject:

Few people are aware of the importance of the bee-keeping business in Michigan, or of the amount of honey annually gathered in the State. Dr. Whiting, the local authority on apiarian questions, estimates the Saginaw county crop for the present season at not less than 40,000 pounds, a large portion of which finds a market in other States.

Under the old system of bee-keeping apiarists used to gange their success by the number of swarms produced. Now, however, within certain reasonable limits, "swarming" is considered a misfortune and a new "swarm" a loss, for a populous colony will keep at work and gather more honey than the two "swarms."

The article painted on signs and used as a device on one or two State seals is no longer recognized as a bee hive, for its place has been supplied by something more convenient. Many of our older readers will remember, perhaps some of them have used, the process of extracting honey by smoking the bees to death and thus safely getting at the sweets they have stored up, taking white comb and yellow, bee bread, pollen and young bees in one indiscriminate mass. Processes have changed with the hives, and now honey is extracted by the centrifugal process, not only being as pure and white as that in the whitest comb, but the bees are not disturbed and the coarser article left for "home consumption"—that is, the bees consume it and do not seem to feel angry or discouraged because they have been robbed.

In the not very olden times a bee-keeper felt satisfied if he got 15 or 20 pounds of yellow honey per colony, and considered himself peculiarly lucky if he did not get his head stung off in the operation. Nowadays, apiarists consider less than 100 pounds of honey per colony a poor season's work, and he must have a strong and healthy colony of bees left as well as the honey.

Bee-keepers now take as much pains to improve their stock as cattle or horse breeders. No slow-going bees are tolerated; they must get to work early in the morning and keep at it until late at night, and to get bees of this industrious disposition the bee-men send to the uttermost parts of the earth.

Among the States, Michigan stands in the front rank in the bee-keeping business. The first society for improvement in bee-keepers' methods and appliances was started in Michigan, and its success has been such that the greatly-increased product of honey and consequent reduction in price is fast causing the article to be regarded as a necessity, rather than a luxury.

Do Bees Hear?—The London *Capital and Labor* of Nov. 15, 1882, gives the following on this subject:

At the meeting of the Linnean Society last week, Sir John Lubbock read an account of his further observations on the habits of insects made during the past year. The two queen ants which have lived with him since 1874, and which are now, therefore, no less than eight years old, are still alive, and laid eggs last summer as usual. His oldest workers are seven years old. Dr. Muller, in a recent review, had courteously criticised his experiments on the color sense of bees, but Sir John Lubbock pointed out that he had anticipated the objections suggested by Dr. Muller, and had guarded against the supposed source of error. The difference was, moreover, not one of principle, nor did Dr. Muller question the main conclusions arrived at, or doubt the preference of bees for blue, which, indeed, was strongly indicated by his own observations on flowers.

Sir John also recorded some further experiments with reference to the power of hearing. Some bees were trained to come to honey which was placed on a musical box on the lawn close to a window. The musical box was kept going for several hours a day for a fortnight. It was then brought into the house and placed out of sight, but at the open window, and only about seven yards from where it had been before. The bees, however, did not find the honey, though when it was once shown them they came to it readily enough. Other experiments with a microphone were without results. Every one, Sir John Lubbock said, knew that bees when swarming were popularly, and had been, ever since the time of Aristotle, supposed to be influenced by clanging kettles, etc.

Experienced apiarists were now disposed to doubt whether the noise has really any effect, but Sir John Lubbock suggested that even if it had, with reference to which he expressed no opinion, it was possible that what the bees heard were not the loud, low sounds, but the higher overtones at the verge of, or beyond, our range of hearing.

As regards the industry of wasps, he timed a bee and a wasp, for each of which he provided a store of honey, and found that the wasp began earlier in the morning (at 4 a. m.), worked on later in the evening, and came oftener during the day. He did not, however, quote this as proving greater industry on the wasp, as it might be that it was less sensitive to cold. Moreover, though the bee's proboscis was admirably adapted to extract honey from tubular flowers, when the honey was exposed, as in this case, the wasp appeared able to swallow it more rapidly. This particular wasp began work at 4 in the morning, and went on without any rest or intermission till a quarter to 8 in the evening, during which time she paid Sir John 116 visits.

Honey Exhibits at Fairs.—The *Indiana Farmer* remarks as follows:

An examination of the various premium lists of the district and county fairs of the State, shows there is not the encouragement given to the bee-keeping interest that it is justly entitled to. The production of honey is growing rapidly and is becoming of equal interest to that of any of the several agricultural industries of the State and is fully entitled to equal consideration at the hands of the county and district boards, and we have no doubt would receive just consideration if properly presented. It is the duty of each and all who are interested in this pursuit to see that the matter is brought to the attention of the gentlemen composing the boards. The usual meetings for the revision of the premium lists takes place during the month of January. Let the many bee-keeping societies see that the matter is attended to without delay, and in counties where no societies exist let several bee-keepers join together, make up a list which they think would be suitable for the premium list and present it to their county fair officers.

☞ The deacon's son was telling the minister about the bees stinging his pa. "Did they? Well, what did your pa say?" "Step this way a moment," said the boy, "I'd rather whisper it to you."—*Ex.*

Examine the Date following your name on the wrapper label of this paper; it indicates the end of the month to which you have paid your subscription on the Bee Journal.

CORRESPONDENCE

For the American Bee Journal.

The Sunflower for Honey.

ARTHUR TODD.

I have read with great and increasing interest many articles upon this subject, and there is an aspect of the question that appears to me well worth study, on which I would say a few words. The flow of honey from plants being so largely dependent on climatic influences, should bad weather come at flowering time, the honey crop may prove a total failure; but, if the plant chosen for the honey yield has a value totally separate from any honey value, then the failure of the honey crop will not be so serious an item. In any case then the bee-keeper would raise a crop.

This consideration has set me thinking, and having read some articles lately upon sunflower cultivation and the cultivation of green fodder plants, I made some research, and find that the sunflower, which is highly extolled as a bee plant has a large value in itself as a grain-producing and forage-producing plant. I have copied and sent you herewith some information as to its cultivation and yield that may not be known to the majority of your readers. There are plants that are suitable for fodder that yield 100 tons and over (when it is cut green) to the acre, the flowers of which are admirable for bees. The borage family produce such.

If the good farmer cannot consume all his green fodder in the summer, he has only to store it in silos to have his crop available in midwinter, or if near a town he can readily dispose of it as cut. Any bee-keeper that plants for his bees, should, in my opinion look well, first to the honey value of the flower of the plant he plants; secondly, the honey crop over, what does he receive from the plant itself?

This subject is one well worthy of ventilation, and as a result we will all enjoy "more light."

The Sunflower.—A light, rich soil, and as unshadowed by trees as possible suits it best. It is now much cultivated for its oil and as a food for cattle and poultry. The following directions for its culture on a large scale, are applicable on a reduced extent for the garden.

The earlier the seed can be got into the ground the better, say the beginning of April, as the crop will be ready to harvest by the latter part of August, which will be of the greatest importance to growers. The necessary quantity of seed required for an acre depends upon the condition of the soil, and varies from four pounds to five pounds; but of course, it is advisable to sow a little more than is actually wanted, to provide against accidents. The seed should be drilled into the ground, and the distance from row to row 18 inches, the plants to be thinned out to 30 inches from plant to plant, and the number of plants at this distance would be about 14,500 per acre; at 18 inches from plant to plant 25,000 per acre, and at 12 inches from plant to plant, 32,000. The produce of this kind of grain, like that of most others, varies considerably, according to the state of the soil, climate, and the culture that is employed, but the average quantity is about 50 bushels per acre. This will produce 50 gallons of oil, and of oil cake 1,500 lbs. The stalks when burnt for alkali, give 1,120 pounds of potash.—*Johnson's Dictionary of Gardening.*

A well-known large composite plant, yielding an abundance of seeds which are excellent for feeding poultry. It requires a good soil of a clay basis, but it will grow on most tilled lands. It is raised in France for oil, and should be sown broadcast, and thinly, or in rows 18 inches apart. It soon grows sufficiently to cover weeds. An acre will carry 25,000 plants 12 inches apart, and yield 50 bushels of seeds, and upward of 50 gallons of good oil, valuable for the table, lamps, or soap making. The cake is one of the most nutritious fodders known. 1,500 lbs. will be obtained from the above crop. The leaves are also eaten by cattle, and the young plants removed in thinning, form good provender. The stalks are rich in potash, yielding from eight to ten per cent. of it in their ash, but should be returned to the land as manure. It also contains a large proportion of nitre.

The young plants form as good a crop to plough in as the Jerusalem artichoke which is indeed of the same genus as the sunflower.—*Gardner's Farmers' Dictionary.*

Some of the uses of this now popular flower may be enumerated. In France the leaves are used as forage for the cattle, who are said to eat them with great relish and avidity. The stalks make an excellent fuel, and yield a large quantity of potash after they are burned; or if not wanted for that purpose, the ashes may be used as manure by sowing it over the land, or mixing it in the manure heap.

In Portugal the seeds are used to make a wholesome and nutritious bread, and when roasted, they form an excellent substitute for coffee; in some parts of the Continent a kind of *bouilli* is made of them, which serves as food for infants. They also yield, by expression, a fixed oil, little, if any, inferior to olive oil, which is used in some parts of Europe, both for burning in lamps, and for other domestic purposes to which olive oil is applied, and for making soups. As food for poultry they have been found to be very nutritious.

One acre will produce 50 bushels of seed, yielding 50 gallons of oil and about 1,500 lbs. of oil cake, and the stems will yield about 10 per cent. of potash. The pith of the sunflower has been recommended by M. Perry for the preparation of Moxa, for which it is well adapted by the nitre it contains, enabling it to burn without being blown upon.—*Journal of Horticulture,* London, England.

Bee-Keepers' Exchange.

Non-Swarming Strains of Bees.

E. E. HASTY.

Some years ago it seemed to me very desirable to develop a strain of bees that would not swarm. The idea was to have them prolific and energetic, so that any reasonable increase could be obtained at will by dividing, and yet have them so averse to swarming that all the progeny of a queen would remain and work together, when that course seemed best. Is this practicable? Is it desirable? I have come to doubt a little in both points. As it is best to be sure we are right before we go ahead, it may be well to have the matter a little more thoroughly talked over than it has been heretofore.

On the second query just let me talk heresy a little. I have been so much at home in the *Exchange*, almost ever since its commencement, that I believe the boys will bear good-naturedly with just a little heresy. Non-swarming means colonies of immense size, and I do not more than half believe we want them, except for purposes of brag. I think that immense hordes of bees, like great masses of men, get in one another's way and waste time. I would expect 40,000 bees to store more honey, working as two colonies, than the same bees would working together. I cheerfully confess, however, that I may be utterly wrong in this. And my doubts only extend to the warm season; in winter and spring I am quite willing to have all the bees together we are likely to get together. It is also plain that where there is but one principal honey harvest, we do not want the bees to swarm right in the midst of it. Swarming, if allowed, should be reduced to some sort of control.

As to practicability, it looks at first very simple to get a colony that has not swarmed for many years, and divide them and sub-divide them and build them up, until a whole apiary of non-swarming bees is obtained. I have not tried this, nor can I put my finger on any other man who has tried it; but, using the best light that is in me, I should predict that, when such an apiary was once built up, the owner would find his bees swarming almost as bad as other people's bees. Success is probably possible in this line; but it will take a great many years to reach it, I fear. Stirring the fire makes things "bile over." Increase an old, neglected, unprofitable, stagnant, non-swarming colony to a hundred, and perhaps only two or three of that number will show any disinclination to swarm whatever. These few would then have to be taken as a new starting point, and the apiary built up afresh from them. The second result would probably be the same as the first, except there might be a little increase in the number that were slow to swarm. Again, and again, the process would have to be gone through with, gaining the desired result only little by little. Then new blood would have to be brought in, or allowed to come in, else the whole establishment would become degenerate and worthless from close breeding; and to introduce fresh blood without losing all the little that had been gained would be a very difficult problem.

Because a single colony omits to swarm when the others around it are swarming, it by no means follows that it is developing the non-swarming tendencies.

I think that most such cases are caused by a failing queen. If the queen begins to fail early in the season, and the bees do not supersede her, it may be expected that the colony will dwindle down and neither swarm nor store much honey. If, however, the queen lays pretty well in March and April, and begins to decline in fertility in May, the colony may, if I mistake not, make a fine record in honey storing. In such a case the keeper would be liable to think that he had a non-swarming colony when he had nothing of the kind.

Again, we will suppose that a lot of bees become generally and utterly lifeless and worthless, like a flock of sheep that have "all run out;" whatever non-swarming tendencies they might show would not prove of any account to the breeder, I think. I have had a case this season where what seems to be a sort of constitutional disease has prevented swarming. The ground in front of the hive has been almost constantly sprinkled with dead bees, and the sentinels have been kept very busy trying to expel the invalids and cripples. I presume that the best of the bees of this colony do not live as many days as they ought. The net result is, that the colony has never been crowded enough to be driven to swarming, although a large amount of brood has been raised. It would be a sad mistake to begin with such a colony as this one to breed non-swarmers.

Swarming has raged greatly with me this summer, and only one other out of 68 colonies has omitted to swarm. In the last case I think there was some reluctance to swarm, but also very moderate fertility on the part of their queen.

As to the size of the brood chamber affecting swarming, my opinion is like this. Contracting stimulates swarming up to a certain moderate limit; but excessively small room for brood, especially if the pinch is caused by the combs being blocked up with honey, hinders or prevents swarming. Here, then, we have about four sorts of non-swarming, that may occur without the bees having any real non-swarming tendencies that could be transmitted to progeny. There is such a thing, however, as a tendency to non-swarming, and it may be, after all, that we want it; and it may be, that some time in the future we shall have non-swarming breeds of bees, as we now have non-sitting breeds of fowls.

It is a somewhat surer indication of genuine non-swarming when a considerable apiary refrains, but even then I suspect that some discounts must be made. It is no very uncommon thing for an apiarist to report only 10 or 12, or 20 swarms from a large apiary. Is there not in most of these cases, not degeneracy exactly, but just a little of what might be termed stagnation of the blood? If a good queen from somebody else's apiary was made the mother of the drones, would not the number of natural swarms increase three or fourfold? It also looks as if swarming was very largely a matter of locality. I have a locality where the early supply of pollen is very profuse, hosts of alders shedding pollen even before bees can get out to gather it. Acres upon acres of poplars and willows follow. The willows are of many species, some very early and some very late. Fruit bloom is about medium. White clover is abundant, but seldom yields much honey, owing, I suppose, to the sandy nature of the soil. Basswood is found scarcely anywhere except a little fringe of it along a creek that runs by. August, instead of being a gap in the honey, is not unfrequently better than July, and about as good as June. A splendid spread of late fall flowers closes the season. Failure to get honey enough to winter on is almost unknown—at least during the thirty years we have kept bees here. But, on the other hand, it is quite rare for a day's run of honey to reach even three pounds. Another man's locality has so little early pollen that he feeds flour to get his bees started; a rush of honey in June, coming in at the rate of ten pounds a day; and almost nothing at all afterwards. It is pretty plain that the steady, long continued supply of my locality will provoke the maximum of swarming (31 swarms in August this year, and a total of 167); while the year's honey all in a heap, of the other man's locality, will favor the minimum. I take it that a great rush of honey tempts all the bees, except the very young ones, to go out and gather, and soon the cells are so blocked up with honey that the queen has little room to lay.

In those cases sometimes reported where a colony of bees has continued without swarming for many years, there is one condition that is almost always present, if my memory is not at fault. Such bees are in diverse situations, often in a bee-house, sometimes on a bench out of doors, or, most frequently of all, in a quiet garret; but they agree in this one thing, comb built abundantly outside the hive. Meditating on this circumstance a theory arose in my mind that may possibly prove valuable. The overflow of bees from such a hive, spread out among the outside combs and make themselves comfortable, while the overflow from an ordinary hive cling together in a hot and torpid mass, until they resolve that "anywhere, anything is better than this." The discomfort of hanging out, we may well believe, impels many that have nothing to do to remain inside, sadly in the way of those actually at work, until they, too, are discontented, and inclined to "fly to other ills they know not of." It may transpire that surplus of bees does not necessarily compel swarming, as long as we can keep them comfortable and out of the way of where work is going on.

Richards, O.

Honey and Money.

I love you, love, for good or ill,
  As good bees love sweet honey—
I love you, love, soul, heart and will,
  For sober skies or sunny.
And yet I pause, I falter still,
  For O! one doubt, one fear doth thrill.
My darling, have you money
To buy some clover honey?

I love you, love, I love you, love,
  But, O, you must have money—
A red rose is a rose, my love,
  But if it hold not honey,
The busy bee he will not stay,
  But, humming airs, he hies away,
My darling, have you money
To buy the clover honey?—*Selected.*

For the American Bee Journal.

Another Instance of "Old Fogyism."

C. THEILMANN.

While reading J. E. Pond's article, on page 630 of the Weekly BEE JOURNAL, I remembered a conversation I had this fall with an old acquaintance, and an early settler of this part of the country, to whom I paid a visit while on a business trip through the country.

Arriving at his place I found him just at the brimstone business, destroying his bees. Taking a look around where he was at work, I saw a lot of box hives torn apart, and honey, with pollen and some brood in the combs, in pans, dishes, etc., while he was killing another colony. I can hardly describe the feelings which came over me at the sight. I asked him why he destroyed his bees in such a manner, and obtained the honey in such an impracticable way? He answered: "My father kept bees for 30 years, and I was raised among them, and I guess this is as good a way to obtain honey as any; and this is the way my father did it." (All his bees were in box hives.) I then asked him in what way he could control his bees in his hive? "How do you control yours?" he replied. "Look up there," he said, pointing to a slim, tall tree, "I was in danger of my life this summer in getting a swarm of bees down from it." I then told him that my bees were in Langstroth movable-frame hives, that I could control them, to a great extent, in swarming, and that I could look in and examine every comb in the hive in a few minutes, and if the bees acted strangely, I could see what was wrong; besides enumerating many other advantages.

I then asked him about the sale of his honey. "Well," said he, "I could only get 12½c. per lb. for it, in Plainview, the other day, by the side of yours, and the storekeeper did not much care to buy mine at all." He also acknowledged that my honey, which was in the one piece sections, was very nice and neatly put up. I sold it readily for 18c. per pound.

It is hard for some of these old fogies to turn to practical apiculture; they still hang to their father's ways of bee-keeping, and not only realize but little for their produce, but in many instances reduce the local price of the honey which is put up in good style.

Theilmanton, Minn., Dec. 8, 1882.

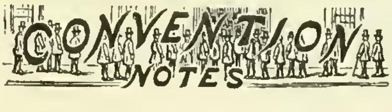
For the American Bee Journal.

Dry Clover Chaff for Packing Bees.

G. L. PRAY.

Having but a few colonies and lots of dry goods boxes, I take a box large enough to put the hive in, with a 4 or 5 inch space all around the hive, and saw the box so that the top will be slanting enough to run the water off, and make a tight roof over the box. I then tack two 2-inch strips across the bottom of the box, on the inside, and fill it up even with the top of the 2-inch strips with dry clover chaff, and lay an inch board on that, and cut a hole through the box of the same size as the entrance of the hive, covering it on a level with the top of the inch board, and then take the board out and put the hive in the box, bottom board and all, the entrance facing the hole through the box and make a bridge from the entrance of the hive to the hole in the box, so the bees can go out and in when they please, and pack with dry clover chaff all around the hive. I take the cloth over the frames off, if it is thickly covered with wax on the under side, and put on a thick piece of factory cloth or canvas over the frames, and then I cover the whole hive with clover chaff, about 6 or 7 inches thick, and put on the roof, and keep the entrance all open in cold weather, and keep the snow away from the front of the box. The same can be done with rough, cheap lumber. If put away for winter in the above plan, I think it is as safe to winter bees as it is to winter sheep or calves, if they have plenty of good honey, and lots of bees, and a good queen. I have wintered my bees on this plan, with clover-chaff packing, for the last 3 winters, and have yet to lose the first colony in wintering.

Petoskey, Mich.



☞ The Southeastern Michigan Bee-Keepers' Association will hold their annual meeting in the court-house at Ann Arbor, Jan. 20, 1883. All are invited.

H. D. CUTTING, *Pres.*
G. J. PEASE, *Sec.*, Ann Arbor.

☞ The Ohio State Bee-Keepers' Association will meet in Columbus, in the rooms of the *Ohio State Journal*, on Tuesday and Wednesday, Jan. 9 and 10, 1883. A full attendance of members, and all interested in bee-culture, is requested, as matters of interest and importance will be discussed.

DR. H. BESSE, Delaware, O., *Pres.*
DANIEL SPEAR, Cardington, O., *Sec.*

Local Convention Directory.

1883. *Time and Place of Meeting.*

Jan. 9.—Cortland Union, at Cortland, N. Y.
M. C. Bean, Sec., McGrawville, N. Y.
9.—Ohio State, at Columbus, Ohio.
D. Spear, Sec., Cardington, Ohio.
9-11, Northeastern, at Syracuse, N. Y.
G. W. House, Fayetteville, N. Y.
11, Nebraska State, at Wahoo, Neb.
Geo. M. Hawley, Sec.
16.—Eastern N. Y., at Albany, N. Y.
E. Quakenbush, Sec., Barnerville, N. Y.
18, Champlain Valley, at Middleburg, Vt.
T. Brookins, Sec.
19, 20.—Mahoning Valley, at Berlin Centre, O.
L. Carson, Pres.
20.—S. W. Mich., at Ann Arbor,
G. J. Pease, Sec., Ann Arbor.
Feb. 3.—Northern Ohio, at Norwalk, O.
8.—Maine State, at Dexter.
Wm. Hoyt, Sec.
April 5.—Utah, at Salt Lake City.
E. Stevenson, Sec.
May 11.—Iowa Central, at Winterset.
J. E. Pryor, Sec.
—, —Texas State Convention, at McKinney.
Dr. W. R. Howard, Sec.
Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.
Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Union, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

Read before the N. B. K. S. at Cincinnati.

The Rearing of Good Queens.

DR. J. P. H. BROWN.

The matter of rearing queens with a view to the improvement of our bees, is certainly of no mean consideration to the bee-keeper. It involves principles, collateral influences and manipulations, that, to discuss fully, would require a volume instead of a short paper. Hence I can do no more than simply touch upon a few of the most important points bearing upon the subject.

Before proceeding further it may be well to refer to queens reared under what is called the "*swarming impulse.*" This swarming fever, if it may be so called, usually takes place under the most favorable circumstances. The colony is in the most prosperous condition. It is crowded with worker bees of every age. Drones make the air resonant with their powerful wings. Both honey and pollen are coming in abundantly, and the atmosphere within the hive is maintained at an even temperature. The queen-cells that are built are usually well developed, particularly if in localities on the comb favorable for their construction. The food is bountifully supplied, and the queens that come forth are mostly good specimens of this class.

These natural conditions of a colony of bees when building queen-cells must never be lost sight of by the breeder of queens. They are all-important, for no good queens can be reared without their observance.

With these conditions kept constantly in mind, the principles of rearing queens may be formulated into the following propositions:

1. The hive must be well filled with bees and the bulk of them must be young ones.
2. There must be a most abundant supply of both pollen and honey.
3. The amount of brood supplied should be limited in quantity, in order to concentrate the working force of the colony, and it should embrace eggs just hatching or larvæ not over one day old.
4. The temperature should be warm enough not to chill the brood; and the weather mild, pleasant and settled.
5. Drones must be flying.

Now I believe it possible that collateral influences can be brought to bear upon these natural conditions so that they can be aided and directed toward bee-improvement. These influences may be summed up to be:

1. Careful selection of breeding stock with special reference to those qualities that it is desirable to perpetuate and add to.
2. Selection of drones from the most vigorous queens whose worker progeny are noted for size, strength, and honey-gathering capacity.
3. Endeavoring to breed *out* bad qualities and to breed *in* good.
4. A rigid system of pruning cells and killing defective queens.

That there is a capacity for improvement in the honey bee, I think can hardly be questioned. We know that both plants and animals are endowed with such a capacity, and why should the bee be an exception to this natural law?

Our very delicious and wholesome apple of the present day, was, originally, the sour, miserable Siberian crab; our sweet and juicy peach was from a bitter fruit of Asia; our improved Irish potato sprang from an insignificant tuber of South America. Our short-horns and improved breeds of cattle, our Essex and Berkshire hogs, our fancy breeds of poultry, pigeons, etc., have been brought to their present state of high perfection by intelligently and carefully breeding up the wild originals.

It may be asked by what *modus operandi* can these improvements best be effected? To the practical and trained mind each of these collateral propositions naturally suggests the best method of applying the means to secure the ends.

Queen-rearing establishments should be, if possible, located in isolated localities where there are no other apiaries to interfere. For this reason, towns and villages, where usually abound many bees, are no fit places to rear pure queens. All apiaries should be supplied with pure stock. Objectionable drones must be excluded. Fertilization in confinement would smooth this task, but as this seems to be, for practical results, off in the distant future, we must resort to some other measures. By the use of the knife, comb-foundation, and drone traps, it becomes rather easy to regulate the drones in our own apiary; while the most available means must be resorted to for their extermination in contiguous apiaries.

How far this improvement can be carried with the bee is difficult to determine; as the organs of reproduction in the queen, as well as her fertilization, are anomalous—marvels!—a volume!!—so unlike the breeding of our domestic animals, that the queen breeder will always have immense difficulties to contend with.

Ever since the creation of the bee, for thousands of years, the theory of the "survival of the fittest" has been in practical operation, and it is very doubtful if the common bee of to-day is any improvement over the bees that Samson found in the lion's carcass. Nature, unaided, is kind enough to perpetuate the race, but she has left it to man's intelligence to assist in the improvement.

It is not yet a quarter of a century since the first Italian bees landed on our shores, and in this limited time they have been improved both in looks and in honey-gathering capacity. I am bold to assert that there are breeders of this race in America, whose queens will average better in looks, in vigor and in prolificness—workers better for business—than queens that come from Italy to-day.

Augusta, Ga.

Read at Maine State Convention.

Bee-Keeping—Past, Present, Future.

LUCIEN FRENCH.

I shall begin as far back as my memory extends and perhaps give some stories or reminiscences I have heard farther back. I recollect that grandfather and my father kept bees together, and used a hive about twenty inches high and one foot square, with sticks across. Often, when the busy workers had gathered a winter's supply, they would consign from one to ten colonies to the brimstone pit, or rob them of their stores, getting from five to fifty pounds of honey, such as it was.

They would then select the whitest and best honey in the comb, to eat in the family. The rest, with bees, larvæ, and bee bread, they would mash all up together, and strain it through a cloth (or what they could of it), and soak out the remainder in water and make an intoxicating beverage of it called "metheglin." They kept from 10 to 20 colonies and never sold any honey. All they knew about beeology was that bees had stings and knew how to use them, which I learned to my cost in early life; that they made honey, not collected it, and that they would rob and kill them in spite of their stings.

They also said that when the head of a family, who kept bees, died, they must go and tell the bees, and dress them in mourning, and, if they did not, the bees would all die; and when the bees swarmed, they must drum on old tin pails and milk pans, and blow on trumpets or anything to make a noise, creating a general hubbub in order to make the bees cluster or light, so as to hive them. I am sorry to say there are many who manage their bees in this way now, in the nineteenth century, with all the light that has been thrown on the subject of bee-management.

Now I will contrast some modern improvements with the old methods of managing bees, and will say that these have not been done in one or two years, but are the work of from one to three hundred years.

In introducing my next proposition, *i. e.*, bee-culture at the present time, I shall have to go back to where I find something in the direction of a movable frame hive, which I find in L. L. Langstroth's book on the "Hive and Honey Bee," which book I shall draw largely on, in connection with this subject. I shall also quote from other sources often, giving due credit.

Mr. L. says on page 210 (foot note): "On page 15 I have spoken of the bee hive as a hundred years ago." From "A Journey into Greece" by George Wheeler in 1675-6, it appears that it was at that time in common use there, and probably even then an old invention. Francis Huber, a Swiss naturalist, born in 1750, an enthusiastic apiarist, invented a hive containing 12 frames, one and one-fourth inches wide, and hung with hinges which opened like a book, which he used in his investigations. But to L. L. Langstroth, I think, we are indebted to-day for full, movable comb hives, invented in the year 1851. Dzierzon used his hives. There have been many alterations in his hives, and I may say, "some wise and some otherwise." From the many changes made, we can all take our choice, or make others, but be sure and not have two sizes of frames in your bee yard. Use them until their merits or demerits have been established.

Comb-foundation is another indispensable article for the advanced bee-keeper. A. I. Root says in his "A B C of Bee Culture:" "The first mention we have of wax foundation that was accepted by the bees, was published in the *German Bienen Zeitung* as far back as 1857. Mr. J. Mehring, of Frankinthal, Germany, if I am correct, seems to have been the inventor. Mr. Wagner and others tried it and dropped it again. The sheets made in England and Germany had no side walls, but simply indentations. Mr. Wagner adopted shallow side walls, making it more like natural comb. Until recently it was made upon a pair of plates. Then Mr. Root says: "in the latter part of 1875, I talked with a friend, Mr. A. Washburn, of Medina, Ohio, who is quite an artist in the way of fine mechanical work and machinery, and told him what I wanted. The result was, he made me a machine. Since that time we have had the Dunham, the Olm, the Vandusen flat bottom, with mine included." Then there are quite a number of plate machines, and probably all have some good qualities and their advocates, and with prices from five dollars up to fifty; so we can all have a chance to get such as we like best.

We may change queens, poor to good, change from black bees to Italians, Cyprians, Syrians, etc., or make other changes or crosses we please, even to the wonderful *Apis dorsata* of Java, or the little insignificant South American stingless bee (if we could only get them here and introduce them). We can feed weak colonies in the hive, without fear of robbing; can take out the frames, extract the honey, and put the frames back in the hives for the bees to fill again; can look over the bees at any time, and know the condition of them at all times. If we have the right kind of movable comb hives, we may pile stories on top, or put them under, according as the bees need room; or can use section boxes on top or in the sides of the hive.

The extractor is another improvement in getting larger yields of honey. We have from the South some extraordinary returns, even as high as 700 pounds from one colony in Texas; getting more swarms, even 12 from one; getting more honey and better, than the old way of straining from bee bread, larvæ, dead bees and dirt. Quite a contrast to the old way of getting strained honey!

Comb foundation is another great help to the bees and their owner. You can hive a swarm of bees on foundation (in times when honey is coming in plenty) one day, and the next day the bees will be carrying in pollen and honey. In three days, some claiming as high as 20 pounds, saving the bees some one or two week's time, perhaps right in the midst of our best honey harvest of white clover or basswood. We may have straighter combs and less drone comb in the brood chamber. It takes, it is estimated, at least 20 pounds of honey for the bees to consume while they are secreting one pound of wax, which makes a saving of about 17 pounds of honey, or the price of it, as wax is a secretion of the bees. You can hive small or late swarms on foundation, and instead of consigning them to the brimstone pit, can feed them up (if we have a strong colony) and put in a young and prolific queen, and make a valuable colony of them, worth from five to ten dollars the next spring, at a cost of from one to four dollars. There is still another way in which you can save the loss of your pets, that is to go to some of your neighbors, who kill their bees, and ask them to let you have the bees, if you will take the honey from them, letting them have the honey and you the bees—those they have condemned to death by brimstone, or some other way. Then feed them up on sugar, as you would weak colonies, and rescue them from destruction.

In consequence of the improvements that have been made, and others not named, honey is put on the market in a purer and neater state, gives better satisfaction and commands a higher price than formerly. It formerly sold (when it could be sold at all) from eight to twelve cents per pound; now, honey in Maine sells at from twenty to thirty cents at wholesale and higher at retail.

Finally and lastly, bee-keeping in prospective, or what I think the improvements will be. There are points not yet settled, which I think will be, and the first is: the best way to winter bees without loss; second, dysentery, the cause and cure; third, the pollen theory, causing dysentery; fourth, spring dwindling, the cause and cure; fifth, improving our race of bees by not only selecting the best races of queens, but the best drones, and the way to do it; sixth, the dry feces theory, but, this I think Prof.

Cook of the State Agricultural College, Michigan, has about settled.

First, the best way to winter bees without loss. There is one thing certain, and that is, they must have some kind of protection in this cold latitude, but the amount and kind we must all decide for ourselves by experimenting. But one thing we shall all have to acknowledge, that is, between the torrid and the frigid zone, there would be quite a difference in protection. While, in Texas, they need none; in Greenland, bees could not be kept at all; but, between the two extremes, we must use the kind and amount, which, by experimenting, we find is best adapted to our latitude and our climate. I know that some "old fogies" still winter their bees in box hives, without any protection except on the lea side of some building or high board fence, without losing any bees; often having killed all their small and weak colonies. But we think there is a better way, that is, to feed and protect them. What should we think of a man who tried to winter his cattle, sheep and swine, in the way many do their bees? The different kinds of protection now in use, are the cellar, a clamp, chaff all around and on top of hives, hives with dead-air spaces, in some building, and some leave them out, at the cold mercies of the winter blast. But I like a properly-constructed chaff hive, or a good dry cellar properly ventilated, or a chaff box, built around the hives, with at least one foot of chaff all around them. Instead of from two to five inches of chaff, I would have from eight to twelve inches. In conclusion I will say that we shall yet find a way to winter bees as safely as any other stock.

* * *

For the American Bee Journal.

Bee and Honey Show at Toledo, Ohio.

Owing to sickness, which was followed by paralysis of my hands and wrists, it has been impossible for me to make a report of the bee and honey show, as a department of the Tri-State Fair, held at Toledo, O., last September.

Every person I have heard speak of it says it was a grand success, but when I read what the editor of the Bee Journal said of it in the number for Sept. 20, I thought he rather "stretched the truth" a little, when he said it was "utterly impossible for one quarter of those who desired to examine the exhibits, to even get within a stone's throw of them," but since the fair was over many have told me they could not get anywhere near the exhibits owing to the crowd, and viewed our fine display only at a distance, and the officers of the Fair Association who, at first, thought any little corner or *old shed* would do for the "bee fixins," were delighted with the display, and have promised us all the room we may want next year, toward making a grand display.

Messrs. Thomas G. Newman, James Heddon, C. F. Muth, and Prof. A. J. Cook, kindly consented to act as awarding committee, but Mr. Heddon was kept at home by sickness; Mr. Muth had to return home when on his way to the fair, and Prof. Cook's college duties kept him at home, so Mr. Newman was the only one of the committee in attendance, and he did his "level best" during his two days' stay to make up for our disappointment in not having the others with us. He seemed as much interested in the exhibits as the exhibitors themselves, answering questions by bee-keepers and others, and doing all he could to make the undertaking a success, and I think that all who had the pleasure of his acquaintance during his stay, will say that he succeeded pretty well.

On the afternoon of Wednesday the bee-keepers present met in the office of the secretary of the fair, on the grounds. Mr. T. G. Newman was chosen temporary chairman and Dr. A. B. Mason of Wagon Works, O., temporary secretary. On taking the chair, Mr. Newman gave a brief, but instructive talk on matters connected with our specialty, and at once made the impression that he was at home on bee matters and well qualified to edit a bee journal.

Mr. F. L. Ripley, of Boston, Mass., was present at some inconvenience, and being obliged to leave in a short time, was called upon and introduced by Mr. Newman. Being a member of the firm of Crocker & Blake, Boston, Mass., dealers in honey, foreign fruit, produce, etc., he spoke intelligently on the marketing of honey and the best methods of fitting it up, highly recommending the pound or half-pound sections for comb honey, with 12 or 24 sections in a crate; and one-pound honey jars, "by all means," for extracted honey. He said that "butter is more of a luxury than honey, and we are selling more of it than ever before." Mr. Ripley's remarks were frequently interrupted by applause, and a vote of thanks was given him, "for the sacrifice he had made to meet with us, and for his able address."

Mr. Newman made a brief address in regard to bee and honey shows, and honey as food and medicine, and the best way to put up honey for the market.

Dr. E. B. Southwick, of Mendon, Mich., spoke of his home trade and said that he could sell more honey in 1½ pound sections than in one-pound sections. Others spoke of their method of putting up and selling their honey, and all were in favor of the smaller sections.

The secretary read an extract from a letter from Mr. C. F. Muth, in which he said, "I have, I think, the best trade in jar honey in America. Desirable packages and purity of honey made my trade. I have failed in getting comb honey this season and am not so very particular about it, as I have lost money on almost every large lot purchased so far. Comb honey will remain a fancy article, while extracted honey is used already by almost every manufacturer using sweets. The increase in the demand from all quarters is very encouraging indeed. My receipts last week were 84 bbls.; this week (three days) 26 bbls.; I am satisfied that I shall have it all sold in about two months. It was different a few years ago. One was afraid of getting an overstock then."

On motion of the secretary, it was voted "that we proceed to organize a Tri-State Bee-Keepers' Association, and Mr. P. M. Puhl, of South Toledo, O., was chosen President; Dr. A. B. Mason, of Wagon Works, O., Secretary; G. W. Zimmerman, of Napoleon, Treasurer.

An evening session of the association was held, Mr. Newman acting as chairman. Mr. Puhl having declined to act as president, Dr. E. B. Southwick was chosen to fill the vacancy, and James Heddon of Mich., H. R. Boardman, East Townsend, O., and Mrs. Dr. E. Rolshausen of Logansport, Ind., were chosen vice presidents.

A committee was appointed to prepare a premium list and make all arrangements for the bee and honey department at the next Tri-State Fair, to be held next fall, and to confer with the officers of the fair association in regard to the same.

There being no programme for the evening Mr. Newman was invited to address the convention. His subject was "The Progress of Bee Culture," and, as usual, being himself interested in what he said, every one who heard him was also interested. He exhibited a queen-cage, that was supplied with the "Good bee food," and which contained a queen and accompanying bees that had already been twice sent to Louisiana and returned, and were in excellent condition. A hearty vote of thanks was given him for his attendance at the fair, his aid in organizing the association, and for his able and instructive addresses, after which the association adjourned to meet at the call of the secretary.

The next day there was a perfect jam of people in our department and a great many went away with only a distant glimpse at the fine display of bees and honey.

Mr. Muth exhibited his honey extractors and honey knife, and made a fine display of choice palmetto honey in one-pound bottles, none of which, on account of his being a member of the awarding committee, was entered for competition.

King, Keith & Co., of New York, exhibited two feeders and a smoker. One of the feeders and the smoker was awarded 1st premium.

Dr. Southwick made a fine display of comb honey, on which he was awarded 1st premium, and also the special, a tested Italian queen, offered by Thomas & Sons, of Somerset, Ky. He was also awarded 1st for comb honey in the most marketable shape, and 2d on his bee-hive.

A. M. Gander, Adrian, Mich., took 1st premium on crate of comb honey, 2d on comb honey in most marketable shape, and on dovetailed sections.

L. A. Lowmaster, Belle Vernon, Ohio, 1st premium on extracted honey in most marketable shape and 1 piece sections; 2d, on display of extracted honey and foundation for surplus; 2d, on display of foundation, "Excelsior" honey extractor and apiarian supplies, and 1st, on Cyprian and Syrian queens and colony of Syrian bees.

L. Eastwood, of Waterville, O., took 2d premium on display of comb honey and on exhibition hive and crate of comb honey.

E. T. Lewis & Co., of Toledo, Ohio, made a nice display of 8 or 10 honey extractors, and a large quantity of apiarian supplies and were awarded 1st premium on display of supplies, foundation mill, honey extractor, bee hive, wax extractor, foundation for brood chamber, foundation for surplus, and honey knife.

D. S. Given & C., Hoopeston, Ill., had one of their foundation presses and samples of foundation on exhibition, and attracted a good deal of attention, especially from bee-keepers. Their press was also awarded the first premium.

And, Mr. Editor, your "humble correspondent feels no little pride" in being able to say that he was awarded 1st premium on display of extracted honey in the most marketable shape, beeswax, glass hive, honey vinegar, package for extracted honey, Italian queens, and 1st and 2d on colonies of Italian bees, and 2d on extracted honey and foundation for brood chamber.

The awarding committee, consisting of Thomas G. Newman, H. H. Overmeyer and H. R. Boardman, did, what I think I am safe in saying but few committees have accomplished where the competition was so earnest, and the exhibitors so competent to act as judges themselves—they gave perfect satisfaction in their awards; not a single exhibitor making a word of complaint, but saying they were satisfied, the awards being all right.

Nearly all of the comb and some of the extracted honey on exhibition, was sold during the fair at good prices and a fair amount that was not on exhibition was disposed of, as were also a goodly quantity of supplies.

A supply of the American Bee Journal, the *Bee-Keepers' Magazine* and *Bee-Keepers' Exchange*, were furnished for distribution to those interested in bee-keeping, and the Bee Journal office accommodated those wanting Cook's Manual, Bees and Honey, and the Apiary Register; as did also the publishers of the *Magazine* with the Bee-Keepers' Text Book and bound copies of the *Bee Keepers' Magazine*.

Mr. Lowmaster exhibited an ingeniously-constructed drone-trap, one that would be of service to such bee-keepers as raise more drones than they have use for, and Mr. Heddon sent a supply of Given foundation, both heavy and very thin, that was fine indeed; also, quite a quantity of figured white spruce sections, that were very nice. Mr. Lowmaster's foundation and sections were not entered for competition.

During his stay at the fair, Mr. Newman gave several addresses, and on the afternoon of Thursday a large box was made to do service as a platform, on which, supplied with honey put up in the most approved styles, he gave a pleasing and instructive talk to such of the crowd as were willing to listen.

When all was done and the fair was over, the verdict of exhibitors, bee-keepers and others was—*Success.*

A. B. Mason.

Wagon Works, O., Dec. 5, 1882.

[We are very sorry that Dr. Mason is so afflicted. To his energy and skill is due the excellent display and exhibit of bees and honey, and we hope he will be able to give the Bee and Honey Show for 1883 his best attention.—Ed.]

☞The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning Co., O., in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th. L. Carson, *Pres.*

☞ The Nebraska State Bee-Keepers' Association, will hold its annual session in Wahoo, Saunders county, Neb., commencing Thursday, Jan. 11th, 1883. Arrangements have been made with the railroads to secure 1¼ fare for the round trip. The Saunders county Bee-Keepers' Association will furnish entertainment free to all visiting apiarists. Bee-keepers from neighboring States will be welcomed.

T. L. VonDorn, *Pres.*

Geo. M. Hawley, *Sec.*

☞ The annual meeting of the Cortland Union Bee-keepers' Association will be held in Cortland, N. Y., on Tuesday, Jan. 9, 1883.

M. C. Bean, *Sec.*

McGrawville, N. Y.

☞ The annual meeting of the Champlain Valley Bee-Keepers' Association will be held at Middlebury, Vt., on Thursday, January 18, 1883, at 10 a. m. T. Brookins, *Sec.*

The North Eastern Bee-Keepers' Association will hold their thirteenth Annual Convention in the City Hall, at Syracuse, N. Y., on the 9th, 10th and 11th days of January, 1883.

Business of great value to every bee-keeper in the State will be brought before the meeting. Every member is requested to attend and bring their friends, that all may be benefited by the action there taken.

The question drawer will be opened each day, and questions answered and discussed. All are invited to send questions. Appropriate diplomas will be awarded to successful exhibitors of implements, etc. Let all attend.

Geo. W. House, *Sec.*

SELECTIONS FROM OUR LETTER BOX

Bees on Shares, Honey Comb, Etc.—I commenced with 8 colonies in the spring; I obtained 6 natural swarms, made 3 by dividing, and bought 3 queens. I put into winter quarters 17 colonies, all in good condition. I am trying to winter on the summer stands by packing in different ways, which I will try, to see whether I can safely bring them through. I think I can ascertain the number of colonies in our county without much expense. I think it will reach 1,000. I bought 13 colonies. I like the Bee Journal well and would not do without it if it cost twice as much. Does honey comb injure the stomach? In taking bees on shares what arrangements should be made? The amount of honey I obtained was 450 pounds in 2-pound sections. I sold my honey at home at 20c. per pound.

D. R. Rosebrough.

Casey, Ill., Dec. 1, 1882.

[Wax is indigestible in the human stomach, but we do not know that it injures it; the wax must pass off through the alimentary canal in the same condition it went into the stomach. There is so little of it in comb honey that it would hardly be noticed, unless eaten in large quantities. Besides, there is something about even the comb that is sweet and enticing to the palate; hence the expression—"sweet as honey, or the honey comb."

It is usual for one party to furnish the hives of bees, and the other party the care and labor. The expense of new hives, surplus boxes, comb foundation and queens is usually divided equally, and at the end of the season the honey and increase of bees are equally divided—leaving each to take all chances of marketing, as well as wintering.

Always make a written contract, stating the agreement in full, and then there will be less liability of a misunderstanding.

We shall be pleased to receive the report you offer for your county.—Ed.]

The Season's Work.—Our bees came out last spring in fine condition, without the loss of a colony or a queen. After our spring sales we had 40 colonies to begin the season with. We keep none but pure Italians. We now have 105 colonies, all in winter quarters, in good condition. Surplus honey secured, in comb, 2,500 lbs.; extracted, 2,700 lbs.; total, 5,200. About one-fourth of our colonies, spring count, were devoted to queen-rearing. I have been engaged in bee-culture for many years, and I think the prospects for energetic bee-keepers brighter than ever before. F. A. Snell.

Milledgeville, Ill., Dec. 12, 1882.

From Geneva, N. Y.—I commenced the season with 25 colonies of Italian bees; took 800 lbs. of comb honey in 2 pound sections and increased to 45 by natural swarming. I will send you statistics from Ontario Co., N. Y., as near as I can get at them, if desired.

WM. BERRYMAN.

Geneva, N. Y., Dec. 12, 1882.

[Certainly; we shall be pleased to have the statistics you so kindly offer to give. State the number of colonies last fall, in spring, and now, as well as the honey crop.—ED.]

Experience of a Beginner.—In December, 1878, I bought 18 colonies of black bees, 13 of them in Langstroth and 5 of them in box hives, for which I paid $54. They were in bad condition. I wintered them in a bee house and lost all but 7 colonies. During the summer of 1879, the 7 colonies increased to 16, but produced no surplus honey. I wintered them again in a bee house and lost all but 4 colonies. During the summer of 1880 I had no increase, and no surplus honey. I packed them in chaff for winter and lost all but 2 colonies. During that winter I read Cook's *Manual* and the AMERICAN BEE JOURNAL. The success of others prompted me to persevere and make use of the knowledge I had gained. On the 11th of May, 1881, I transferred my 2 colonies to Langstroth hives. In the latter part of June I divided and increased them to 6 colonies; during the summer I obtained 60 lbs. of surplus honey. On October 15 I packed them in chaff on their summer stands, each colony having from 40 to 60 lbs. of honey. April 6, 1882, I found them all in good condition, with a shrinkage of 10½ to 16 pounds of honey, per colony. About April 15 I took 2 frames of honey from each hive and replaced them with foundation, which, in 8 days, was drawn out and filled with brood. Each week I spread the brood, as directed by Mr. Doolittle in the BEE JOURNAL, and when the white clover blossomed, the hives were full of bees and the combs full of brood. I then put on the boxes. The result of this year's work is as follows:

No. of Colony.	Swarms.	Comb Honey, lbs.
1	3	132½
2	0	111
3	0	84
4	1	116
5	2	129½
6	3	189
Total	9	762

During July and August I Italianized my 15 colonies with dollar queens, which have proved to be all pure Italians. October 20th I packed them in chaff for winter, each colony having 36 to 50 lbs. of honey. I think the successful bee-keeper needs a good knowledge of the principles of his business to start with. He will then get much help and encouragement from the continual teachings of a good periodical like the AMERICAN BEE JOURNAL.

WM. MORSE.

Rockford, Ill.

Troubled with Moth Worms.—My experience in bee-culture is limited, and, so far, not encouraging. The greatest trouble with which I have to contend is the moth; even some of my strong colonies have been seriously annoyed by worms. I give them close attention, at least, weekly, and every time I examine I find my bottom boards with numerous bee-moths on them. I look in vain in your journal for some remedy or preventive. I hope you or some of your subscribers will come to my relief. I use the frame hives and have the Italian bees.

JNO. H. BASS.

Glennville, Ala., Dec. 8, 1882.

[Italian bees, unless the colonies are weak, will usually soon expel the bee-moth. As soon as the weather is warm enough, take out the combs, and with the point of a knife remove the worms and webs, being careful to kill the worms in the debris, or they will crawl back again. To hang the frames infested with moth in the middle of a strong colony of Italian bees, one at a time, is the best way we know of to get them thoroughly expelled. If your colonies had been really strong in numbers the invaders could not have gained control.—ED.]

Hard on the Bees.—Yesterday morning a blizzard struck us which caused the mercury to sink to 2° above zero this morning, while the day before yesterday the bees had a flight. So severe a change would certainly make havoc among my bees were they not all snugly packed in chaff. Chaff packing is a necessity here; without it, wintering would be risky; with it, a single colony need not be lost.

J. W. CARTER.

Pleasant Dale, W. Va., Dec. 8, 1882.

Prolific, but Dark and Cross.—I commenced this season with 2 colonies and one queen (a 3 frame nuclei) from W. P. Henderson. I have increased them to 15, a few of them being weak in numbers. I obtained about 50 lbs. of honey. The Henderson queen was as prolific as any two I had; her bees are very good workers; they are dark in color and as cross as any hybrid I have.

HUGH WILLIAMS.

Racine, Wis., Dec. 11, 1882.

The Coldest Day of the Year.—The warmest day during the year was September 18, when it was 96 degrees in the shade. Our bees had frequent flights up to December 6, when we had 3 inches of snow; on December 7 the thermometer stood at 22 degrees below zero, 14 degrees colder than at any time during the past winter. I have read Mr. L. G. Purvis' letter, on page 778, with great interest; his former apiary in Warren Co., Iowa, was two miles from mine. Mr. Purvis is a progressive apiarist and has done much to develop the science of bee-keeping in this neighborhood.

HIBERT CLARK.

Palmyra, Iowa, Dec. 11, 1882.

My Report for 1882.—I commenced the spring with 18 colonies, increased to 25 by natural swarming. I have taken 1,800 lbs. of comb honey in 2-lb. sections, used in hanging frames. My best colony gave 210 lbs. Bees in this locality are in good condition for winter; strong in numbers and have plenty of stores.

E. DOTY.

Macksburg, Iowa, Dec. 10, 1882.

More Apiaries Than One.—I would be glad to learn of some one, through the BEE JOURNAL, who has had experience with two or three apiaries away from home, if it would be better to place them in the hands of some family and go to them often, or to hire some experienced hand. Any information in regard to this subject will be thankfully received.

G. W. CHURCH.

Benton Harbor, Mich., Dec. 11, '82.

[Mr. James Heddon has had such experience and we presume will say what has been his custom and state his experience. The late Mr. Adam Grimm, we believe, put out quite a number of colonies each season, on the farms of neighbors, giving them a small sum, per colony, for allowing them to remain on their farms. The stipulated amount, as well as the quantity of care they were to receive, we do not now remember. Perhaps Mr. George Grimm will kindly give us the information.—ED.]

Wax from Cappings.—The report of what I said at the Michigan State Convention, concerning the amount of wax obtained from cappings, is not quite correctly stated on page 793 of the BEE JOURNAL for Dec. 13. It should be as follows: "When melted, I only obtained 30 lbs. of wax from 60 lbs. of caps; 30 lbs. from 3,000 lbs. of sealed honey; and 10 lbs. from 1,000 lbs. of sealed honey. Cappings are only one-half net wax." A line was evidently omitted by the printer.

Abronia, Mich. T. F. BINGHAM.

Success to the Bees.—I had, last spring, 12 colonies; wintered on the summer stands; came through all in good condition; swarmed naturally May 1, and the last swarm came off on September 2; I now have, in all, 65 colonies in good condition for winter. They gathered 2,000 lbs. of comb honey.

E. C. CRANE.

Burlington, Iowa, Dec. 6, 1882.

My Bee House for Winter.—Last winter I had 75 colonies in a double-walled bee house, made on purpose for wintering bees. I left 25 on their summer stands without protection, the latter came through in excellent condition; of the former, 1 starved before spring, and 4 dwindled away in spring, which left me 95 colonies. The early part of the season was very cold and wet, but my bees gathered enough to keep up breeding. Basswood buds were killed on May 23 by frost, but from Aug. 15 to Sept. 23 my bees were very busy, and gathered about 4,500 lbs. of surplus honey, half of which was comb, the other half extracted, and increased to 186, which are all in good condition for winter. 130 are now in the bee house and keep very quiet at a temperature of 40° to 42° above zero. The outside temperature this morning showed 23° below zero. I feel myself obliged to add that I obtained more profit by the three years' subscription to the Bee Journal that would overrun a hundred times the price I paid for it.

C. Theilmann.
Theilmanton, Minn.

Platform for Hives.—Has any one used stones for platforms for hives? What size sections can I use on a hive 12x15¼ inches? I have heretofore used small frames. This has been the best honey season I have had since 1877.

George Drew.
Bunker Hill, Ill., Dec. 12, 1882.

[We can see no advantage in using stones for platforms; they will be very cold for the bees to travel over. You can use either the regular one or two-pound sections in a comb honey rack, or even the half-pound sections; or you can use "cases" to hold either size, for side storing, as may be desired. See article on small sections for surplus honey elsewhere in this paper.—Ed.]

The Season's Operations.—I had 48 colonies of bees last spring. I had to feed all my bees from the last of April till the 1st of June, when they began to gather some honey from white and red clover, but not very much. Next came basswood and sourwood. I took 800 lbs. of honey that was gathered from basswood and sourwood, and obtained 1,800 lbs. of aster honey. I had 2,100 lbs. of extracted honey and 500 lbs. of very nice comb honey in 1, 2 and 4-lb. sections. My honey is all of the very best quality. I increased from 48 to 63 colonies, mostly by natural swarming. I have a good home market for all my honey. I sell extracted honey at 15 cents per pound, and comb honey at 20 cts.

Jno. F. Fry.
Ronceverte, W. Va., Dec. 6, 1882.

Best Honey Crop in 10 Years.—As the season's work has closed I will send in my report for the year 1882. I commenced in early spring (February) with 27 colonies; had 52 natural swarms; have taken 6,461 lbs. of extracted honey and 274 lbs. of comb honey; total, 6,735 lbs. Average, per colony, spring count, 249 lbs. The largest amount from 1 colony and its increase was 475 lbs.; largest yield from 1 colony 263½ lbs. (Pure hybrid.) From a 3-frame nucleus, set out with queen-cell February 25, I took 162 lbs. of honey; 3 of my nuclei swarmed. About the time the queen's progeny began to fly, the queens, not being clipped, the bees made good their escape to the woods, but they were not counted as swarms. I cannot say what my yield of honey would have been if I could have kept up with them. For about 12 days, right in the height of the honey harvest, my hives were all honey-bound, and I could get no help, and being engaged in the supply business, with such a rush on me for hives, etc., that I could not avoid it. Could not tier-up, for I had no extra hives; hived many swarms in boxes until I could catch up with my work. Now, for fear that some may think this was an average season in Texas, I would say that it has been the best of many seasons, perhaps, the best in ten. I have kept bees for 30 years in Texas. I enclose $2 for the Weekly Bee Journal for 1883, for *no* progressive bee-man could do without it.

J. S. Tadlock.
Luling, Texas, Dec. 11, 1882.

Do Bees Pay?—In 1881, hive No. 1 (in my care) increased to 6 by natural swarming, and gave 126½ lbs. of comb honey. In 1882, the 6 wintered all right, and gave 16 swarms and 823 lbs. of comb honey. They are all blacks or hybrids. One of them, No. 35, gave 236¾ lbs.; its first swarm gave 122¾ lbs. No. 35 was a swarm on the 1st of August, 1881, from a swarm from No. 1.

E. Pickup.
Limerick, Ill., Dec. 4, 1882.

Excellent.—I had 5 colonies of bees, all blacks, last spring; bought 1 three-frame nucleus of Italians; increased by dividing and natural swarming to 23 colonies, in good condition. I have 6 colonies of Italians, 1 Cyprian, and 16 blacks and hybrids. I received from them 573 pounds of comb honey, and 227 lbs. of extracted; in all, 800 lbs. I think that is doing tolerably well for a novice. I shall try and do better next year.

John Nebel.
High Hill, Mo., Dec. 14, 1882.

Have Done Well.—I have 40 colonies packed in sawdust. I had several colonies that gave over 100 lbs. of comb honey, each, in 2-lb. sections. I am a life subscriber to the Bee Journal.

Henry W. Burnham.
Ballston Spa, N. Y.

Progress in Bee-Keeping.—With the Bee Journal in its present form, it seems to me all should be satisfied, and also with the reading matter it contains. When I look back over the 25 or 30 years that have passed, and compare the management of bees at that time with the present, I feel satisfied, as one in the family of bee-keepers, that we have made as great progress as in any other calling in life's labor. One very important part in the management of our bees to make them more profitable and less vexatious, is to be able to successfully carry them through all kinds of winters. As there are so many of us experimenting in this direction, it is to be hoped some will succeed perfectly. There may be such now, but it is not generally known; when it is, and when such is generally followed, then our business will be more reliable. In its present uncertainty, few of us can know what amount of preparation to make for our bees in the way of hives or honey receptacles. Many have had an apiary in the fall of which they were proud, but that pride was turned into disgust the next spring. Be patient, dear editor, and keep giving us the experience of the bee keepers in this part of our calling, and, by-and-by, we shall get right.

L. James.
Atlanta, Ill., Dec. 14. 1882.

Packed in Chaff.—I now have 70 colonies in good condition. My bees are principally Italians and are packed in chaff. 20 colonies were packed as early as the latter part of September. I think, next year, I shall pack all my bees as early as September. I do not think my bees were ever so uniformly in good condition for winter as at the present time. From 43 colonies in the spring they have increased to 70, principally by natural swarming. My surplus honey was 2,200 lbs., one-third extracted honey, and the rest, comb. I sold the comb honey at 15 cents and the extracted honey at 12½c. per lb. I think I have done well with my bees for the past two years, and how could I do otherwise with so good an instructor as the American Bee Journal, and with such appliances as the Excelsior honey extractor, Hetherington's uncapping knife and Bingham's smoker? Long life to the Bee Journal.

W. S. Pierson.
Eureka, Mich., Dec. 8, 1882.

Large Increase.—I began with 2 colonies in the fall of 1881, and now have 23 colonies in good condition, in winter quarters.

Wm. Sabins.
Burlington, Iowa, Dec. 14, 1882.

☞ When changing a postoffice address, mention the *old* as well as the new address.

A Religious Newspaper.—We desire to call the attention of our readers to one of the largest, ablest and most popular religious newspapers published—one that secures the best writers in this country and Europe, regardless of expense; has the best and fullest book reviews of any paper in the country; has able articles upon financial and commercial subjects; has departments edited by specialists and devoted to Fine Arts, Music, Science, Religious Intelligence, Missions, School and College, News of the Week, Hymn Notes, the Sunday-school, Legal and Sanitary questions, Biblical Research (something that cannot be found in any other newspaper in the United States), Farm and Garden, Insurance, Weekly Market Reports, etc.—in fact, a newspaper which, with its twenty-two distinct departments, is suited to the requirements of every family, containing a fund of information which cannot be had in any other shape, and having a wide circulation all over the country and in Europe. We refer to The Independent, of New York, now called "The largest, the ablest, the best." See advertisement, in another column, and send a postal card for free specimen copy.

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For either the Weekly or Monthly Editions.

A line of this type will contain *about* 8 words; TWELVE lines will occupy ONE-INCH of space. Transient Advertisements payable in advance. Editorial Notices, 50 cents per line.

SPECIAL RATES.—Advertisements will be inserted in both Weekly and Monthly editions, at the following prices, if wholly paid in advance:

SPACE.	One month	Two mo'ths	Three mo'ths	Six mo'ths	One Year.
1 in. 12 lines	10.00	18.00	25.00	38.00	50.00
2 in. 24 lines	20.00	32.00	40.00	60.00	80.00
3 in. 36 lines	25.00	40.00	50.00	75.00	100.00
4 in. 48 lines	32.00	50.00	65.00	90.00	125.00
5 in. 60 lines	40.00	60.00	75.00	110.00	150.00
6 in. 72 lines	45.00	70.00	90.00	130.00	175.00

For the Weekly alone, 20 per cent. less than the above rates. On yearly advertisements, payments may be made quarterly, but must be in advance.

Advertisements withdrawn before the expiration of the contract, will be charged the full rate for the time the advertisement *is* inserted.

THOMAS G. NEWMAN,
925 West Madison Street., Chicago, Ill.

Special Notices.

☞ A few of our subscribers are in arrears for the present year—having requested us to continue, and they would pay soon. Will all such please take this as a request to send on the two dollars with a renewal for next year, if possible.

◆

☞The American Express Company money order system is the cheapest, safest and most convenient way of remitting small sums of money. Their rates for $1 to $5 are 5 cents; over $5 to $10, 8 cents. They can be purchased at any point where the company have an office, except Canada, and can be made payable at any one of the company's 4,000 offices.

For safety, when sending money to this office get either a post office or express money order, a bank draft on New York or Chicago, or register the letter. Postage stamps of any kind may be sent for amounts less than one dollar. Local checks are subject to a discount of 25 cents at Chicago banks.

◆

Preparation of Honey for the Market, including the production and care of both comb and extracted honey, instructions on the exhibition of bees and honey at Fairs, etc. This is a new 10 cent pamphlet, of 32 pages.

New Premiums for 1883.

As the season for reading has now arrived, we hope that each of our subscribers will endeavor to send at least one new subscriber for the Weekly BEE JOURNAL for 1883 and thus not only help on the cause of progressive bee-culture, but assist in sustaining the only Weekly bee paper in the world.

Providence has smiled on the bee-keepers during the past season, and as a general thing they are abundantly able to procure a good assortment of bee-literature.

In order to encourage every one who keeps bees, be they few or many colonies, to thoroughly read the many very interesting books on bee-culture, now published, we have determined to make liberal offers, which will be available until January 1, 1883, as follows:

To any one sending us $8 for any books they may select from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for one year.

To any one purchasing $4 worth of books, selected from our "Book List," on the last page of this paper, we will present the Weekly BEE JOURNAL for six months or the Monthly for one year.

Any one sending us a club of **two** subscribers for 1883, for the Weekly, with **$4**, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For **three** subscribers, with **$6**, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For **four** subscribers, with **$8**, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For **five** subscribers, with **$10**, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly BEE JOURNAL for one year.

To get any of the above premiums for the Monthly BEE JOURNAL send double the number of subscribers, and the same amount of money.

◆

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly BEE JOURNAL for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly BEE JOURNAL and either of the above for one dollar less.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly BEE JOURNAL, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly and Monthly BEE JOURNALS will be distinct papers, each having its own sphere of operation and different readers. The Weekly will contain all that the Monthly does, besides twice as much other matter.

We shall aim to make the Monthly BEE JOURNAL a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

◆

Subscription Credits.—After sending subscriptions to this office, we would respectfully ask every one to look at the label on the wrapper of the next two papers, and there they will find the credit indicated thus: Those who have paid for the first six months of next year will find "June 83" after their names. Those who have paid for the whole year will find "Dec. 83" on their papers. The credit runs to the *end* of the month indicated. If the mark is "Dec. 82," it means that the subscription is paid until the end of the present year. Please remember that the credit given on this label is a sufficient notification of subscriptions due and receipt for payments made. If not so indicated within two weeks after sending money to us, you may be sure something is wrong, and should write to us about it. It will save annoyance and trouble if our subrcribers will give this matter due attention.

◆

☞ The time for the usual winter rush of correspondence is here, and we wish to impress upon all our patrons the necessity of being very specific, and carefully to state what they desire for the money sent. Also, if they live near one post office, and get their mail at another, be sure to give us the address that we already have on our books.

The Apiary Register.

All who intend to be systematic in their work in the apiary, should get a copy and commence to use it.

For 50 colonies (120 pages)......$1 00
" 100 colonies (220 pages)...... 1 50
" 200 colonies (420 pages)...... 2 00

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable ones.

◆

Advertisements intended for the BEE JOURNAL must reach this office by Saturday of the previous week.

◆

☞ The BEE JOURNAL is mailed at the Chicago post office every Tuesday, and any irregularity in its arrival is due to the postal employes, or some cause beyond our control.

◆

☞ Articles for publication must be written on a separate piece of paper from items of business.

◆

Ribbon Badges, for bee-keepers, on which are printed a large bee in gold, we send for 10 cts. each, or $8 per 100.

◆

☞ Do not let your numbers of the BEE JOURNAL for 1881 be lost. The best way to preserve them is to procure a binder and put them in. They are very valuable for reference.

◆

Emerson Binders—made especially for the BEE JOURNAL, are lettered in gold on the back, and make a very convenient way of preserving the BEE JOURNAL as fast as received. They will be sent, post-paid, for 75 cents, for the Weekly; or for the Monthly, 50 cents. They cannot be sent by mail to Canada.

◆

☞Renewals may be made at any time; but all papers are stopped at the expiration of the time paid for, unless requested to be continued.

◆

☞ We carefully mail the BEE JOURNAL to every subscriber, but should any be lost in the mails we will cheerfully send another, if notified before all the edition is exhausted.

◆

Bee Pasturage a Necessity.—We have just issued a new pamphlet giving our views on this important subject, with suggestions what to plant, and when and how. It is illustrated with 26 engravings, and will be sent postpaid to any address for 10 cents.

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., December 18, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The supply of extracted honey is fully up to the demand. My quotations are: 7c. for dark and 9c. for light, delivered here.

BEESWAX—It is quite scarce. I am paying 27c. for good yellow wax, on arrival; dark and off colors, 17@22c.

AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—Demand is good for extracted honey by the barrel for manufacturing purposes and for table use. The demand is very good for honey in 1@2 lb. jars. A good deal of comb honey could be sold if we had a good article at a rate within the views of the consumer; *i. e.*, which could be sold at 20c. in the jobbing way and 25c. at retail.

We pay 7@10c. for extracted, and 16@20c. for good comb honey in sections

BEESWAX—Is in good demand at 20@27c. per lb. on arrival.

CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey does not keep pace with the receipts. There is a large surplus on this market at present, and prices are from 2 to 3c. lower than last month.

We quote: white comb honey, in 1@2 lb. sections, 17@18c. Dark comb honey, hardly any demand. It is held at 12½@15c. Extracted—White brings from 9@10c.; dark, 8@9c.; kegs, half-barrels and casks bring about same price.

BEESWAX—Choice Yellow, 30c.; dark to medium, 18@25c.

R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Stock is small, with but little demand, and buyers bid low.

White comb, 17@20c; dark to good, 11@14c; extracted, choice to extra white, 8@9½c.; dark and candied, 7@87½c.

BEESWAX—We quote 25@28c.

STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dull. Comb, at 16c. for large or hard to 19@20c. for choice bright in small packages; extracted at 8@9c.; strained, 6½@7c.; choice, in smaller quantities, brings more.

BEESWAX—Prime bright steady at 26@27c.

R. C. GREER & Co., 117 N. Main Street.

CLEVELAND.

HONEY—Has changed in price a very little, we find it necessary to sell all grades about 1 cent per ℔. less. Best white, in 1 ℔ sections, 20@21c. per per pound; in 2 lb. sections, 18@20c. Extracted is very dull indeed, hardly any sale.

BEESWAX—Scarce, 28@30c.

A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is a fair demand, but mostly for small lots, and the general tone of prices remain steady.

We quote: White clover, first quality, 1 ℔ boxes, 25c; 2 ℔ boxes, 23@25c.; buckwheat, 1 ℔ boxes, 20c.; 2 ℔ boxes, 16c. Extracted, white, 13c.; dark, 10@11c.

BEESWAX—30@32c.

D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—30c.

CROCKER & BLAKE, 57 Chatham Street.

◆

Sample Copies of the AMERICAN BEE JOURNAL will be sent *free* to any person. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office.

◆

☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

Honey as Food and Medicine.

A new edition, revised and enlarged, the new pages being devoted to *new* Recipes for Honey Medicines, all kinds of cooking in which honey is used, and healthful and pleasant beverages.

We have put the price of them low to encourage bee-keepers to scatter them far and wide. Single copy 6 cents, postpaid; per dozen, 50 cents; per hundred, $4.00. On orders of 100 or more, we print, if desired, on the cover-page, "Presented by," etc., (giving the name and address of the bee-keeper who scatters them). This alone will pay him for all his trouble and expense—enabling him to dispose of his honey at home, at a good profit.

◆

CLUBBING LIST.

We supply the **American Bee Journal** and any of the following periodicals, one year, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage is prepaid by the publishers.

	Publishers' Price.	*Club*
The Weekly Bee Journal,	$2 00..	
and Gleanings in Bee-Culture (A. I. Root)	3 00..	2 75
Bee-Keepers' Magazine (A. J. King).	3 25..	3 00
Bee-Keepers' Exch'nge (Houk & Peet)	3 00..	2 80
Bee-Keepers' Guide (A. G. Hill)	2 50..	2 35
Kansas Bee-Keeper	2 60..	2 40
The 6 above-named papers	6 35..	5 50
The Weekly Bee Journal one year and		
Prof. Cook's Manual (bound in cloth)	3 25..	3 00
Bees and Honey, (T. G. Newman) "	2 75..	2 50
Binder for Weekly Bee Journal	2 75..	2 50
Apiary Register for 100 colonies	3 50..	3 00
Apiary Register for 200 colonies	4 00..	3 50

The **Monthly Bee Journal** and any of the above, $1 less than the figures in the last column.

◆

☞Postage stamps, of one, two or three cent denomination, accepted for fractional parts of a dollar; but money is preferred.

◆

☞ The result of the election has proved a grand success, but not more so than Kendall's Spavin Cure is proved to be every day. 48w4t

SWEET CLOVER SEED.—New and clean, 25 cts. per lb. BEN CLENDENON, Grinnell, Ioa 50w13

LANGSTROTH AND SIMPLICITY CHAFF HIVES, with movable upper story, section boxes, metal-cornered brood frames, wide Langstroth frames and comb foundation. Send for Price List. A. B. MILLER & SON, Wakarusa, Elkhart Co., Ind. 44wtf

DUNHAM COMB FOUNDATION—40c. per pound; extra thin and bright, 10 sq. ft. to the lb. 48c. Send for samples. Wax worked 10c. per lb. F. W. HOLMES, Coopersville, Mich. 13w1y

ELECTROTYPES

Of Engravings used in the Bee Journal for sale at 25 cents per square inch—no single cut sold for less than 50c. **THOMAS G. NEWMAN,** **925 West Madison Street, Chicago, Ill.**

BE SURE

To send a postal card for our Illustrated Catalogue of Apiarian Supplies before purchasing elsewhere. It contains Illustrations and descriptions of everything new and valuable needed in an apiary, at the lowest prices. Italian Queens and Bees. Parties intending to purchase bees in lots of 10 colonies or more are invited to correspond.

J. C. SAYLES,
Hartford, Wis.
51sm15t

Agricultural Implements.

THE NEW REMINGTON CARBON PLOW,
BEST IN THE WORLD.

Mowers, Hay Tedders, Horse Hay Rakes, Spades, Shovels, Scoops, Steel Rakes, Forks and Planters' Handled Hoes.

THE REMINGTON FIRE ENGINE.

Send for Circulars.
REMINGTON AGRICULTURAL CO.,
48w4t Ilion, N. Y.

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now in its **third year**, has been enlarged to 28 pages. Monthly.

THE INSTRUCTOR is in magazine form with an attractive cover. It is printed from **new type**, on excellent paper, and is sold for **50 CENTS A YEAR, with Seeds, Plants, Etc.**, as premium. Extra inducements to club raisers. **Specimen Copy FREE.** Address

FLORAL INSTRUCTOR,
48w4x **Ainsworth, Iowa.**

GOLDEN ITALIAN QUEENS.

1-frame Nucleus, with Tested Queen	$4.50
2-frame Nucleus, with Tested Queen	5.00
Full Colony, with Tested Queen, before July 1	12.00
Same, after July 1	10.00
Tested Queen, before July 1,	3.00
" " after July 1..	2.50
" " per half doz., after July 1	13.50

Address, by Registered Letter or Postoffice Order,

DR. I. P. WILSON,

1wtf Burlington, Iowa.

Cheap ! Cheaper !! Cheapest !!!

300 COLONIES OF BEES

for sale, in movable frame hives. Also, Queens, Nuclei, Bees by the pound, Hives, Sections, Smokers, Seeds for Honey Plants, and everything a live bee-keeper needs. Send for circular and price list to

E. T. FLANAGAN,
Box 819, Belleville, St. Clair co., Ill.
(Proprietor of Rose Hill, Cahokia, Falling Springs and Lake Apiaries. 1wm1y

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National Cotton Planters' Association of America.

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Which has been pronounced, by a united press, "The most important movement of modern times for the South." The ATLANTA EXPOSITION assumed shape from its ideas.

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Single Subscription, per year	$2 00
Club of two subscribers, per year	3 00
Club of five subscribers, per year	6 50
Club of ten subscribers, per year	12 50

Sample Copies, 10c. Regular Price. 20c.

Address PLANTERS' JOURNAL,
50w4t **VICKSBURG, MISS.**

"BEE-KEEPERS' HANDY BOOK."

$1.00 PER COPY.

Worth 20 times its cost to any bee-keeper

A work giving the author's 22 years' experience in rearing queens. It will be so illustrated and all made so plain that any one can raise as few or as many queens as desired, and have the cells built in rows so that all can be removed without destroying any. It will teach how and when to remove the cells from a colony that has swarmed, and how to preserve all such queens and have them fertilize for future use. **Send name for Circular.** 49smtf

HENRY ALLEY, WENHAM, MASS.

THE INDEPENDENT.

THE INDEPENDENT needs only to be better known to add to its already large list of friends. It has been published for thirty-five years and has acquired a world-wide reputation as the best religious and literary newspaper.

THE INDEPENDENT is not denominational. Its creed and field are broader than any sect. As a Christian journal, its aim is to strengthen and extend Evangelical religion and to defend it against the attacks of Materialism, Atheism and unbelief. It is free to approve or criticise in any of the denominations whatever it believes is designed to advance or hinder the progress of the Gospel of Christ.

In civil and political affairs THE INDEPENDENT will contend for sound ideas and principles. It fought against slavery and the iniquitous system of the Oneida Community. It is now fighting against Mormonism. It believes in the reform of the civil service and tariff, in the purification of politics and in cheap postage, and will maintain those principles which the highest ethics and best intelligence require.

THE INDEPENDENT is designed to suit all tastes and wants. We provide weekly stories by the best magazine writers, poems by the leading poets of America and England (we first published in America Tennyson's last poem), and for others, who look especially for instruction, whether in religious, literary, educational, philosophical, or scientific articles, we furnish what no other periodical does or can. We pay large prices to obtain the most eminent writers. Besides the editorials, there are twenty-two distinct departments, edited by twenty-two specialists, which include Biblical Research, Sanitary, Legal, Fine Arts, Music, Science, Pebbles, Personalities, Ministerial Register, Hymn Notes, School and College, Literature, Religious Intelligence, Missions, Sunday School, News of the Week, Finance, Commerce, Insurance, Stories, Puzzles, Selections, and Agriculture. **32 Pages in all.**

We will report in full Rev. Joseph Cook's celebrated Boston Monday Lectures, which will begin in January. Mr. Cook has just returned from a two years' trip round the world, and his lectures this Winter will attract greater attention than ever.

OUR NEW TERMS FOR 1883.

One subscription, one year	**$3 00**
For 6 months, **$1.50**; for 3 months	**0 75**
One subscription, two years	**5 00**
One subscription, five years	**10 00**

These reduced prices ($2 per annum in clubs of five or more) are very much *lower* than any of the standard religious weeklies.

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In order that one may read a few consecutive numbers of THE INDEPENDENT, and thus learn its value, we offer a month's subscription, as a "Trial Trip," for 30 cents, which can be remitted by postage stamps. Payment of $2.70 in addition will secure the balance of a year's subscription.

Send postal card for free specimen copy and judge for yourself. Address

THE INDEPENDENT,

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PLYMOUTH ROCKS EXCLUSIVELY

VERY FINE EXHIBITION BIRDS, and
Trios Mated for Breeding;
Also, SINGLE BIRDS.

Prices reasonable. Correspondence cheerfully answered.
WM. H. BUSSEY,
38smtf 131 Lake St., CHICAGO, ILL.

Fruit Evaporators,

To be used on a common cooking stove, capacity 3 to 5 bushels per day. Price, complete, $10; in the flat, partly put together, for $6. A few agents wanted. For particulars and prices for Evaporators, Queen Bees, etc., address

JOHN H. MARTIN,
9sm1y Hartford, Wash. Co., N. Y.

The Bee-Keeper's Guide;

OR,

MANUAL OF THE APIARY,

By A. J. COOK,

Of Lansing, Professor of Entomology in the
State Agricultural College of Michigan.

——:o:——

320 Pages; 133 Fine Illustrations.

——:o:——

This is a new edition of Prof. Cook's Manual of the Apiary, enlarged and elegantly illustrated. The first edition of 3,000 copies was exhausted in about 18 months—a sale unprecedented in the annals of bee-culture. This new work has been produced with great care, patient study and persistent research. It comprises a full delineation of the anatomy and physiology of the honey bee, illustrated with many costly wood engravings—the products of the Honey Bee; the races of bees; full desccriptions of honey-producing plants, trees, shrubs, etc., splendidly illustrated—and last, though not least, detailed instructions for the various manipulations necessary in the apiary.

This work is a masterly production, and one that no bee-keeper, however limited his means, can afford to do without. It is fully "up with the times" on every conceivable subject that can interest the apiarist. It is not only instructive, but intensely interesting and thoroughly practical.

——:o:——

Read the following opinions of the Book;

All agree that it is the work of a master and of real value.—*L'Apiculture*, Paris.

I think Cook's Manual is the best of our American works.—LEWIS T. COLBY.

It appears to have cut the ground from under future book-makers.—*British Bee Journal.*

Prof. Cook's valuable Manual has been my constant guide in my operations and successful management of the apiary.—J. P. WEST.

I have derived more practical knowledge from Prof. Cook's New Manual of the Apiary than from any other book.—E. H. WYNKOOP.

This book is just what everyone interested in bees ought to have, and which, no one who obtains it, will ever regret having purchased.—*Mich. Far.*

To all who wish to engage in bee-culture, a manual is a necessity. Prof. Cook's Manual is an exhaustive work.—*Herald*, Monticello, Ill.

With Cook's Manual I am more than pleased. It is fully up with the times in every particular. The richest reward awaits its author.—A. E. WENZEL.

My success has been so great as to almost astonish myself, and much of it is due to the clear, disinterested information contained in Cook's Manual.—WM. VAN ANTWERP, M. D

It is the latest book on the bee, and treats of both the bee and hives, with their implements. It is of value to all bee-raisers.—*Ky. Live Stock Record.*

It is a credit to the author as well the publisher. I have never yet met with a work, either French or foreign, which I like so much.—L'ABBE DU BOIS, editor of the *Bulletin D' Apiculteur*, France.

It not only gives the natural history of these industrious insects, but also a thorough, practical, and clearly expressed series of directions for their management; also a botanical description of honey producing plants, and an extended account of the enemies of bees.—*Democrat*, Pulaski, N. Y.

We have perused with great pleasure this *vade mecum* of the bee-keeper. It is replete with the best information on everything belonging to apiculture. To all taking an interest in this subject, we say, obtain this valuable work, read it carefully and practice as advised.—*Agriculturist*, Quebec.

This book is pronounced by the press and leading bee-men to be the most complete and practical treatise on bee-culture in Europe or America; a scientific work on modern bee management that every experienced bee-man will welcome, and it is essential to every amateur in bee-culture. It is handsomely printed, neatly bound and is a credit to the West.—*Western Agriculturist.*

This work is undoubtedly the most complete manual for the instruction of bee-keepers which has ever been published. It gives a full explanation regarding the care and management of the apiary. There is no subject relating to the culture of bees left untouched, and in the compilation of the work Prof. Cook has had the advantage of all the previous knowlede of apiarists, which he uses admirably to promote and make popular this most interesting of all occupations.—*American Inventor.*

——:o:——

PRICE—Bound in cloth, **$1.25**; in paper cover, **$1.00** by mail prepaid. Published by

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West Madison Street, CHICAGO, ILL.

BEESWAX

WANTED.

State Quantity, Price and Quality.

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Hamilton, Hancock Co. Ill.

THE CONQUEROR.

Large Smokers need wide shields. Bingham's have them, and springs that do not rust and break, and bellows that sparks and smoke do not enter. The Conqueror has all improvements made to date, and a 3x7 inch stove, and 5x7 inch bellows. Sent postpaid for $2. Address,

BINGHAM & HETHERINGTON,
13wtf Abronia, Mich.

SWEET CLOVER SEED,

This year's crop, all of the white variety, 28c. per pound ; $3.75 per peck ; **$13.00** per bushel.

☞ I can fill no more orders for Queens this fall, having sold all I had to spare, leaving many orders unfilled, and with orders still coming in. The advertisement in the Weekly Bee Journal did it.

I. R. GOOD,
5wly Nappanee, Elkhart Co., Ind.

Excelsior Dunham and Vandervort *FOUNDATION.*

Owing to the large advance in the price of wax, I now quote prices thus : Dunham, 10 to 50 lbs., 42c., over 50 lbs., 41c., less than 10 lbs., 44c.; Vandervort, 10 sq. feet to the lb., 1 to 10 lbs., 57c., 10 to 50 lbs., 54c. No discounts. Circular free.

J. V. CALDWELL,
3wly Cambridge, Henry Co., Ill.

LULING, TEXAS,

Is now headquarters for the sale of FINE ITALIAN QUEENS AND BEES. The nicest bee hives. 10,000 feet of seasoned Cypress lumber now on hand for the winter's work ; also, everything used by modern bee-keepers. Write for prices.

BEESWAX WANTED.
14w39t **J. S. TADLOCK.**

MARKETING HONEY

☞ Send **15 CENTS** for Dadant's pamphlet on "Harvesting, Handling, and Marketing Extracted Honey."—You will get many times the value of your **15 CENTS** in the hints and ideas that it will give you. Address,

CHARLES DADANT & SON,
Hamilton, Hancock County, Ill.

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COMB FOUNDATION,

high side-walls, 4 to 16 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS,
Sole Manufacturers,
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Abraham Lincoln, "From Pioneer Home to White House," and **James Abram Garfield**, "From Log Cabin to White House." In English and German. Illustrated with fine steel engravings. By an eminent author. Also, for the **ONLY large steel portrait of Garfield.** Send for **extra terms.**

THE HENRY BILL PUBLISHING CO.,
50w8t NORWICH, CONN.

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ALFRED H. NEWMAN,

WHOLESALE AND RETAIL DEALER IN

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INCLUDING SECTIONS FOR COMB HONEY, SMOKERS, VEILS, GLOVES,

Honey and Wax Extractors, Comb Foundation, Kegs and Pails for Honey, Seeds for Honey Plants, etc.,

923 WEST MADISON STREET,

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Illustrated Catalogue sent free upon application.

BEESWAX.

I pay **27c.** per pound delivered here, for yellow Beeswax. To avoid mistakes, the shipper's name should always be on each package.

ALFRED H. NEWMAN.
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Who will be the first to copy?

25,000 IN USE.

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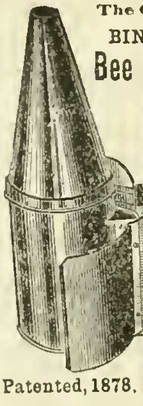

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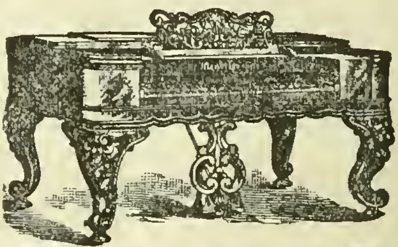

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DEVOTED EXCLUSIVELY TO PROGRESSIVE BEE CULTURE.

Vol. XVIII. Chicago, Ill., December 27, 1882. No. 52.

THE AMERICAN BEE JOURNAL

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THOMAS G. NEWMAN,
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925 WEST MADISON ST., CHICAGO, ILL.
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☞ The contents of this number being included in the General Index to the volume, commencing on page 825 and closing on 828, we omit it *here* from its usual place.

☞ We send this number of the Bee Journal to all the subscribers for the year 1882—Weekly, Monthly and Semi-Monthly—on account of the extensive indexes it contains. Those who have paid for two Weekly numbers a month for a part of next year, will get the new Monthly until the expiration of their subscriptions. Those who have paid for one Weekly number a month will have the new Monthly until the time paid for expires. The new Monthly will be published about the 15th of each month, during 1883.

Prospective and Retrospective.

With this number we close another volume of the Weekly Bee Journal—the pioneer bee paper of America! When its publication was begun, some 21 years ago, it was a venture, which even its best friends feared may be a financial loss to its proprietor, the late Mr. Samuel Wagner. But now, it can count its offspring (bee papers, living and dead,) nearly by the score, and subscribers and patrons by many thousands.

At first it fought the battle of progressive apiculture single-handed and alone; but, as one after another of the strongholds of superstition and ignorance have been subdued and silenced, many new bee periodicals have appeared, paying a just tribute to the Bee Journal by *imitation*—the sincerest form of flattery.

The Bee Journal in the future will be as it has been during the past score of years of its existence, save as it advances in every feature of progressive journalism. It will continue to *lead* in all the qualities of our ever advancing art, and maintain its high position as the most enterprising bee paper in the world. It will enter upon the new year with the most flattering prospects, fully expecting all whose subscriptions expire with the present number to promptly renew, and thus enroll themselves as companions for the year 1883.

The Weekly Bee Journal will continue to be the medium for the promulgation of the best thoughts of the most advanced bee-keepers of the day—keeping abreast of the highest progress, favoring the freest discussion of all disputed points of apiculture, advancing progressive ideas and the most modern thoughts and improvements—and, while we at once enter upon the work of the new year, we stop but just moment, to wish all our readers and patrons

A HAPPY NEW YEAR.

☞ A postal car, with tons of papers and letters coming to the West, was destroyed near Schnectady, on the New York Central Railway, Thursday last. We hope none of the letters sent by our correspondents were in it. There were 18 sacks and 2 pouches of mail for Chicago in that car, and all were totally destroyed.

☞ We point, with pride, to the comprehensive indexes to be found in this number of the Bee Journal. The Index to Correspondents contains about 1,200 names of those whose experience and counsel have been given one or more times in the Weekly Bee Journal for the present year. These all have our thanks and we hope they will favor us with similar correspondence during the coming year. Over a thousand subjects have been discussed, as shown by our "Index to Subjects," covering the entire vocabulary of bee-culture, and the correspondence is from every State, Province and Territory of North America, as well as from Europe, Asia, Africa and Australia. To all we give a thousand thanks, and ask them to send on their articles and letters during the coming year, so that the Weekly Bee Journal may not only equal the present volume, but even surpass it.

☞ A correspondent, in this number of the Bee Journal, says that he has noticed that an "open winter" is succeeded by a poor season. This was not the experience of the bee-keepers of the West during the past year. The last winter was an "open" one, but the honey crop was abundant; that of the year before was not so large, though it succeeded a "snug" winter.

The Medicinal Qualities of Honey.

There is no doubt but that honey is one of the most valuable of medicines. We have often advocated its use and seen its good effects, and would now add another testimonial to those already published. It is from Mr. Luther Corey, Yorkshire, N. Y. He says: "On Oct. 1 I was taken with bilious and gastric fever, followed by a relapse in the shape of inflammation of the lungs and their surroundings, also congestion of a portion. Until within 2 or 3 weeks I was unconscious, and therefore not aware of my condition, at which time I commenced eating honey and have taken it at all times of the day and night, until I have eaten five two-pound boxes of honey. My cough has subsided, and my lungs are healing much beyond the physician's expectations. I think the honey is doing the business. I am now able to walk about the house."

Karl Gatter, editor of the *Bienenvater*, at Vienna, Austria, with whom we had an excellent visit in the summer of 1879, assured us that his life was saved by the use of honey. He published a small pamphlet on the curative powers of honey, and said:

"A strong influence for publishing this book was the fact that I, a sufferer from hemorrhages, already given up to despair and at the verge of the grave, was saved by the wonderfully curative powers of honey; and now, thank God, I am freed, not only from weakness of my lungs, but rejoice in the possession of perfect health.

"At my first attack, upwards of thirty years ago, powders and tea were ordered for me, which benefitted me but little. I then placed but little confidence in honey, which I had used occasionally, and in small quantities. Judging from my present knowledge, I believe that the honey was the only remedy that was doing me any good, and it is this that I have to thank for the gradual, but sure restoration of my health.

As my disease increased I began to use cod liver oil, which weakened and injured my stomach so that I could hardly digest anything more, and my condition became worse and worse. Again I returned to honey, when my sufferings immediately began to decrease and disappear. Besides the use of honey, I took pains to preserve my breast and lungs from injury, which, in my trying situation as public teacher, was almost impossible. My disease being caused by my constant teaching during so many years. I gave up my profession. and honey was my only medicine, whereby I, by the simplest, safest, quickest and pleasantest manner (for I was fond of honey), relieved the disease in my throat; and out of thankfulness I now write this book for the use and benefit of many, especially for the use of those suffering from diseases of the throat and lungs."

Though Mr. Gatter is now nearly 70 years of age, he is hale and hearty, and nearly as active as a man of 30.

In ancient times the free and regular use of it as an article of diet, was regarded as a means of securing long life; and it thus came to be popularly considered as a specific against disease. Honey is nutritive and laxative, and is employed largely in the preparation of medicine. In diseases of the bladder and kidneys, honey is an excellent remedy. Honey is a sedative of no ordinary power. A friend, who is a practicing physician, mentions one of his patients, whose habits of observation were seldom equaled, having by the kick of a horse one of his knee-joints badly broken, the pain and anguish being very severe, his daughter offered him some wine or tea. He declined, but said she might give him some honey. Dr. A. remarks: "My own observations justifies the wisdom of his selection. Try it."

Sweet Clover in England.

Mr. Henry Jonas, of London, England, writes us as follows:

I want to try some sweet clover seed to see if it will flourish in England. If it will, I think it is not likely to be planted for honey only, but as sheep feed. Our farmers are much dependent on their clovers in the summer; these frequently from drought and from the land being "clover sick" and I hope the *Melilotus Alba* will give our land the change of crop it needs, and our bees a bountiful harvest into the bargain.

American readers of the *British Bee Journal* will be pleased to hear that it changes hands with the new year. It is the only bee paper in England and hitherto has been in the hands of a good bee master, but unfortunately a hive maker, and for the future our paper will be in the hands of the Rev. H. R. Peel, the honorable secretary of the British Bee-Keepers' Association, who has done more to advance bee-keeping in England than any man living, and we all hope it will be far more valuable to our bee-keepers. Our British Bee-Keepers' Association was only established in 1874, but since that time we have advanced far beyond our expectations.

Concerning the Melilot, or sweet clover, in England, the London *Journal of Horticulture* says, that "it is well known in England and we have cultivated it for a period of thirty years solely for our bees, and have repeatedly seen it growing in cottage gardens in various parts of this country." The *Journal of Horticulture* then adds:

"The term "Sweet Clover," is simply a misnomer, since all clovers (*Trifoliums*) are sweet-scented, and preferred by the bees to any other plant grown. The proper name of this plant is *Melilotus leucantha*, in plain English, White-flowered Melilot, a biennial which grows freely in any soil to the height of 6 feet, with very branching stems and large cluster of sweet-scented white flowers.

The best time for sowing is the early autumn, and generally speaking it does not bloom until the second year, flowering profusely through July and August, when it forms seed and dies. It may, however, be sown at the spring time, and succeeds well. Its one great disadvantage is that it is useless to the farmer, even as bedding for his cattle. after seeding. We have known it harvested as hay, though doubtless if well secured before blooming it might form a rough kind of clover hay. It is of the same class as the *Melilotus officinalis*, or yellow Melilot, so common in many parts of the country, although it has been described as a distinct species—the result of cultivation. The yellow kind is an annual, grows to the height of 2 or 3 feet only, and is cultivated as food for cattle, growing in thickets, hedges, and borders of fields. When dried it gives a strong scent of new-mown hay.

From our own observation the *Melilotus leucantha* is preferred by the bees to any known plant, and is unequalled as regards the quantity and quality of the nectar secreted, and, which is even of more importance, yields its precious nectar in all seasons. We have never found any difficulty in procuring the seed from our principal seedsmen when giving its proper name, and we strongly advise our bee-keeping readers, if not already cultivating it, to give it a trial."

Millions for Defense.—An Iowa paper is responsible for the following, which evidently refers to the Rev. O. Clute, of Iowa City. He must have been troubled with chicken thieves last summer:

An Iowa City clergyman has 153 hives of bees, which are arranged around his hen house, and when he hears a thief fooling round that establishment in the darkness, he just lies still and waits to hear a hive upset, and then laughs at the sound of wild yells gradually dying away in the distance.

☞ When writing to this office on business, our correspondents should not write anything for publication on the same sheet of paper, unless it can be torn apart without interfering with either portion of the letter. The editorial and business departments are separate and distinct, and when the business is mixed up with items for publication it often causes confusion. They may both be sent in one envelope but should be written on separate pieces of paper.

New Premiums for 1883.

As the season for reading has now arrived, we hope that each of our subscribers will endeavor to send at least one new subscriber for the Weekly Bee Journal for 1883 and thus not only help on the cause of progressive bee-culture, but assist in sustaining the only Weekly bee paper in the world.

Providence has smiled on the bee-keepers during the past season, and as a general thing they are abundantly able to procure a good assortment of bee-literature.

In order to encourage every one who keeps bees, be they few or many colonies, to thoroughly read the many very interesting books on bee-culture, now published, we have determined to make liberal offers, which will be available until January 1, 1883, as follows:

To any one sending us $8 for any books they may select from our "Book List," on the last page of this paper, we will present the Weekly Bee Journal for one year.

To any one purchasing $4 worth of books, selected from our "Book List," on the last page of this paper, we will present the Weekly Bee Journal for six months or the Monthly for one year.

Any one sending us a club of two subscribers for 1883, for the Weekly, with $4, will be entitled to a copy of Bees and Honey, in cloth, postpaid.

For three subscribers, with $6, we will send Cook's Manual, in paper, Emerson's Binder for the Weekly, or Apiary Register for 50 colonies.

For four subscribers, with $8, we will send Cook's Manual in cloth, or Apiary Register for 100 colonies.

For five subscribers, with $10, we will send the Apiary Register for 200 colonies, Quinby's New Bee-Keeping, Root's A B C of Bee Culture, or an extra copy of the Weekly Bee Journal for one year.

To get any of the above premiums for the Monthly Bee Journal send double the number of subscribers, and the same amount of money.

* * *

☞ We will send Cook's Manual in cloth, or an Apiary Register for 100 colonies, and Weekly Bee Journal for one year, for $3.00; or with King's Text-Book, in cloth, for $2.75; or with Bees and Honey, in cloth, $2.50. The Monthly Bee Journal and either of the above for one dollar less.

The Monthly Bee Journal for 1883.

At the request of many who have heretofore taken the Monthly and Semi-Monthly Bee Journal, we shall next year print a Monthly consisting of 32 pages, issuing it about the middle of each month, at $1.00 a year, in advance; 2 copies for $1.80; 3 copies for $2.50; 5 copies for $4.00; 10 or more copies at 75 cents each. An extra copy to the person getting up a club of 5 or more.

The Weekly and Monthly Bee Journals will be distinct papers, each having its own sphere of operation and different readers. The Weekly will contain all that the Monthly does, besides twice as much other matter.

We shall aim to make the Monthly Bee Journal a welcome and profitable visitor to the homes of those who feel the need of a cheap, first class, reliable bee paper in pamphlet form—whose time is too much occupied to read a weekly, or whose means or requirements are more limited, and who can dispense with the routine matter more properly belonging to a weekly.

AMONG OUR EXCHANGES

MISCELLANEOUS.

Do bees remove eggs from one cell to another?—This question is answered by Mr. A. Pettigrew in the London *Journal of Horticulture* in the following language:

Yes, certainly. This I have known and witnessed for fifty years. I have often seen eggs, laid by queen bees before being removed from their hives, set in other cells after their removal, and have known such eggs become queens, thus proving that they were not the eggs of fertile workers. Queen-excluders, then, so much talked about at present, cannot be of much use? No, they are valueless; for if bees determine to breed in any part of a hive queen-excluders will not prevent them. Last September a correspondent of a journal wrote that one of his colonies losts its queen when the combs were filled with honey, brood, and eggs. He removed the frame of honey and gave them a frame of empty comb in its place, The hive was examined four or five days after, when there were found several queen cells on the empty sheet of comb. As it contained no eggs when placed in the hive, he saw that the bees had taken them from one comb to another. Eight queen-cells were erected and filled on the empty sheet. He adds, "There can be no mistake about this, for I took the empty frame from my honey room where it had been laid six or seven weeks." If more evidence be wanted it may be found in the fact that in many instances—I might venture to say in all instances of breeding in supers—the bees first prepare the cells for the reception of eggs; and experienced men on examining supers can tell where the eggs will be deposited. Bees are the masters and determine these matters themselves without consulting queen or queen-excluders. It will be well for bee-keepers to remember these facts.

* * *

Bees require but little Oxygen.—A correspondent of the *Country Gentleman* remarks as follows on the amount of oxygen required by bees:

The idea that a comparatively small supply of oxygen for the healthy existence of the bees, is one which will help to explain some problems in apiculture. It is not in a quiescent state only that they require less pure air than the larger animals. Left to their natural instincts they seal up every crevice about their hives except the entrance. A moment's reflection must convince anyone that with only one small external orifice, and with every space between the combs filled with the living, working, breathing insects, the queen and her progeny must be doing their work in an atmosphere which would be speedy death to any quadruped. The pupæ, sealed up in their cells in this same slightly ventilated hive, afford another example of how the growth and change in insect life may go on with a very slight supply of oxygen.

Subscription Credits.—After sending subscriptions to this office, we would respectfully ask every one to look at the label on the wrapper of the next two papers, and there they will find the credit indicated thus: Those who have paid for the first six months of next year will find "June 83" after their names. Those who have paid for the whole year will find "Dec. 83" on their papers. The credit runs to the *end* of the month indicated. If the mark is "Dec. 82," it means that the subscription is paid until the end of the present year. Please remember that the credit given on this label is a sufficient notification of subscriptions due and receipt for payments made. If not so indicated within two weeks after sending money to us, you may be sure something is wrong, and should write to us about it. It will save annoyance and trouble if our subrcribers will give this matter due attention.

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☞ Constitutions and By-Laws for local Associations $2.00 per 100. The name of the Association printed in the blanks for 50 cents extra.

CORRESPONDENCE

For the American Bee Journal.

Giving Bees a Flight in Winter.

G. M. DOOLITTLE.

Many seem to think that it is necessary to remove the bees from the cellar, during the winter, for a flight, should a warm day occur. When I first began keeping bees I wintered entirely in the cellar.

Believing it to be a good plan to give the bees a chance to void their excrement as often as possible, I carried them all out of the cellar about the 1st of February, if such a thing was possible, returning them at evening, and again they were carried out about 10th of March; thus giving them two flights. One thing I always noticed, that after returning them to the cellar they never settled down as quiet as they were before. Brood rearing was started and the loss caused by the excitement, always noticeable when bees are breeding, was greater than was the accumulation of young bees hatching from the brood, hence each colony were really damaged by being set out.

About this time, I thought I would try the setting out of a part of the bees as before, and leave a part in; so I placed them in the cellar in the fall in such a manner that those I wished to put out, could be removed without disturbing the rest. As opportunity presented they were put out, for their winter flight, while the rest were left quiet until about the 1st of May. Upon setting them out for good, I ascertained that those which had not been disturbed were much the strongest; and upon weighing them I found that those which had not been put out had consumed but about one pound of honey a month, while those given two flights had consumed nearly double that amount.

I remember at about this time a neighbor keeping bees in box hives, invited me over to see his bees, it being about the 1st of February. I found them in rather bad shape, for it had been a cold winter, and the bees out doors could not fly. In looking them over I found a second swarm, whose combs were bright and clean, and seemed to contain a fair colony of bees. A bargain was struck up and I brought this colony home with me, over a rough road, nearly two miles. In the evening I took them into the cellar, turned the hive bottom side up, and threw an old carpet over them. As I had read that bees should never be disturbed in winter, unless just after a flight, I feared that I should lose them unless a warm day occurred so that I could put them out. As none occurred for a week or two I kept close watch of them, and was surprised to find them even more quiet than those that had been in the cellar all winter. As they continued thus quiet I did not put them out until April 25, and the result showed that no other colony in my yard was as good as this one was on May 20.

Since then, after once placing my bees in the cellar, I have left them there till ready to put them out to remain.

If we have a cellar with an even temperature, and that pretty warm, (from 45° to 50°) there is but little difficulty in keeping bees quiet; but if the temperature is allowed to go from 30° to 50°, as it happens, the bees are apt to become uneasy. The keeping of the bees quiet during the whole winter is the great desideratum in cellar wintering, and if they can be thus kept, no flight is necessary, experience has led me to believe.

If I find a colony of bees restless, I ventilate the hive until they are quiet. The cause of uneasiness is (barring disturbing influences, such as mice, etc.) too cold or too warm. If a good colony is uneasy, I try more ventilation by raising the hive up at the bottom, and if it is still uneasy, I take off the chaff at the top, and roll back the quilt a little, sometimes taking it clear off, so as to have them suspended in mid-air, as it were. If it is a small colony, I close the entrance and wrap them up as warm as possible.

When everything is just right, they will appear like so many dead bees upon looking at them with a light, but breath on them slightly and they will move, and thrust out their stings.

To know when they are all quiet and just as I wish to have them, I go some evening to the cellar, open the doors carefully, shutting them after me, and stand listening in the darkness. If they are as they should be, I will hear just a low quiet humming, with, perhaps, one bee in a minute taking wing and flying to the bottom of the cellar, if the cellar contains 50 colonies. If, on the contrary, I hear a loud roaring, with three or four bees flying at a time, I know that all is not right, and ventilate the cellar and hives, until they are as they should be.

As spring comes on, the humming noise grows a little louder, and more bees fly out; so that allowance must be made for the time of the year. Many try to keep these bees that come out on the cellar bottom, in their hives, by using wire cloth, but my experience is that such are bees about to die with old age, and if they are not allowed to come out, they will die in the hive.

Borodino, N. Y.

For the American Bee Journal.

My Experience with Cyprian Bees.

WM. M. ROGERS.

I have two or three times attempted to write an article on Cyprian bees. I have now concluded that a summary would be useful, and therefore forbear sending the longer article that I at first proposed.

I have had great faith in the Cyprians, and I have proved my faith by handling them almost exclusively, since their introduction into this country.

After being well pleased with them, having rarely lighted a smoker when manipulating the colonies, I was all at once put squarely to rout by the fierce and vindictive temper of which others spoke so much, and of which I had previously witnessed so little; even my selected, choicest, *gentlest* colony, proved as refractory as the worst.

On a few points I am well satisfied. If all bees were like Cyprians, there would be but few amateur apiarists and all the interests that flourish through the fondness of men for bees, would languish.

The Cyprian queen is very prolific, but the actual number of bees on hand, except in the hottest weather, is always less than the promise of the preceding brood; but, in settled warm weather, it is practicable to increase Cyprian bees almost indefinitely.

Chaff hives are peculiarly well adapted to spring rearing of Cyprian bees, for in early spring the extensive brood requires uniform protection from atmospheric changes. The Cyprians have taught me that chilled brood means short-lived bees.

I am sure that Cyprians work extensively on the second crop of red clover. They are very prolific queen rearers. I counted this year 75 queen-cells, formed under swarming impulse, in one colony. They are certainly good honey-gatherers, but I cannot run an intelligent line of comparison between them and Italians.

I do not think that their capped honey looks as inviting as that sealed by black bees.

Last spring my Cyprians dwindled badly, but came up rapidly on the approach of warm weather, and were ready for the harvest that did not come in these parts.

I shall return to Italians, unless I can develop a bee of superior qualities on a balanced cross between Italians and Cyprians.

Shelbyville, Ky.

For the American Bee Journal.

Wood Separators for Surplus Honey.

F. C. BENEDICT.

In reviewing the numbers of the Bee Journal for the year 1882, I came to the article by Mr. C. R. Isham on the above subject, on page 120, No. 8. Your closing comments on it leads me to give my experience, and I can endorse all that he says on the subject.

Allow me to give a few facts that will demonstrate themselves to any apiarist who will give them a fair trial. I hold that wood is the best for separators, of any substance yet tried. Paper is good, but the bees will gnaw it badly, when not gathering honey rapidly. The expense of wood separators is much less than tin, wood separators can be furnished at one-third the cost of tin, thereby saving two-thirds in favor of wood, and with one that has machinery they can be made for less. Again, wood, being a non-conductor of heat, absorbs less heat than the tin, making the surplus chamber warmer and more readily entered by the bees when the weather is cool; and on cool nights during the honey flow they are not as liable to leave the sections and go below. Another point in favor of wood, for some who are a little tardy in removing the sections as soon as capped, is that the bees will run upon the wood instead of the capping; when, if tin is used, being colder, they will run upon the capping, soiling it soon, and injuring the sale in market. The wood will not kink in cleaning and will stand more careless handling than tin.

While some contend that bees will brace from separator to capping more with wood than tin, my experience does not prove it to be a fact.

Since I began using wood for separators, in 1880, I have produced from 7 to 10 thousand boxes of comb honey, and not one in 500 was braced from cap to separator.

I do not know the amount of demonstration necessary to prove that wood is practical, better, and cheaper than tin, but if you, Mr. Editor, will come to my place, I will take you into my cutter and we will visit a few of our best and most successful comb-honey producers, such as Messrs. Newman & Son, and C. R. Isham, of Peoria, N. Y.; W. S. Benedict, Moscow, N. Y.; R. B. Rians and Van Eten, of York; M. Dodds and R. Buck, of Warsaw, N. Y.; Stanley Bros. of Wyoming, and many others, and if it is not demonstrated to your satisfaction, we shall feel glad to have met you and we will "kill the fatted calf" and eat the salt of friendship just the same.

My closing advice to those who wish to make any change in their surplus arrangement, where wood can be substituted for tin, is to do it, by all means; for to get the best results, financially, we must invest on that which is the most practical for the least money, and still have that which will aid us in producing a *first class article*, for that will command a good price.

In my next I will have something to say of our surplus arrangement and the use of separators.

Perry Center, N. Y., Dec. 9, 1882.

[We have had some very flattering reports from those who have used the wood separators. We should be glad to take the sleigh-ride with Mr. B. but must forego the pleasure now.—Ed.]

* * *

For the American Bee Journal.

The "Coming Bee."

S. A. SHUCK.

I do not wish Mr. Heddon to infer that I never find any inferior or worthless queens; but, as Mr. Doolittle tells us of having destroyed so many in one season, and, as Mr. Heddon speaks of inferior queens without mentioning this fearful slaughter by Mr. Doolittle, why should it be thought a thing incredible, if I, or any one, should have imagined that Mr. Heddon had found more than 3 or 5 worthless queens each spring, in his apiaries of 150 to 200 or 300 colonies?

To say that I am surprised, is a very feeble expression of my thoughts concerning Mr. Heddon's statement, that he "finds from none to 3 or 5 worthless queens each spring."

In my report, I had no thought of superannuated queens; for all queens, if permitted to live, must, eventually become worthless. Queens that are permitted to live, on account of the superior quality of their offspring, until they become too old to be profitable, I do not consider as belonging to that class called inferior. What I understand by inferior queens, are those that from the time they commence to lay, manifest feebleness, sluggishness or a lack of prolificness; or whose progeny show a lack of some of the traits necessary to place them on a high standard of excellence, such as productiveness, hardiness, etc.

I have had so few of this class of queens, (except where they have mismated, thereby producing inferior, and sometimes worthless workers,) during the past three years, and as all of my queens proved to be from fair to very good for productiveness this season, I do not see why Mr. Heddon takes exception to the yellow bands on my bees, so long as these (yellow-banded) bees are bringing in more honey than any others I have been able to pick up during the past seven years. I have had blacks and hybrids for four years, and Italians and hybrids for three years, and I have become so dissatisfied with hybrids that I destroyed every queen in my apiary this fall, which did not produce three-banded bees.

No. 20, in my report, is the best colony of hybrids I ever owned; but as they were no better than many of my Italian colonies, I destroyed their queen and gave them a young one.

Mr. Heddon says, "as there is no comparison made between Mr. Shuck's strain and any other, we have no evidence that the large yield of honey reported, is at all due to the strain of bees." He also suggests the inference that their honeyless condition on June 1st, is evidence of a worthless strain. If their honeyless condition at so late a date in the season, is evidence of a worthless strain, then I am puzzled to know how it is that, from these bees, with an expense of $45, and my own labor, I have honey to the value of over $500, valuing comb honey at 15 cts. per lb., and extracted at 10 cts. My average yield is larger than that of any other apiary in this section of country, so far as I can learn, and from two to four times greater than that obtained by farmers in this community.

Mr. Heddon characterizes my yield with the phrase "honey shower," and says:—"I know what these honey showers are." Does not Mr. Heddon see that his efforts in this direction, plainly show that, if I had a "honey shower," his "shower" was only twice or three times as "big" as mine? I am willing to admit that we had a good season, all things considered.

Our honey was obtained from white clover, red clover, basswood and heartsease. If Mr. Heddon could have stood as I did on the first week in September, in a large field of red clover and beheld his bees in every direction, and heard that hum of "business," he would again have "thrown his hat" through the columns of the Bee Journal, as he did in August, and the faint echoes of "Eureka! Eureka!!" would have sounded in our ears, as we read his description of how those leather-colored bees sipped the nectar, and of the tons of comb honey that would soon be completed.

Mr. Heddon says: "It is my opinion that he who leaves out the brown bee, thus breeding for yellow-bands, will get away behind in the race," and mention the points of excellence given the German bee over the Italian by Mr. L. L. Langstroth.

While I respect Mr. Heddon's opinion very much, and I am willing to admit that the points of excellence mentioned, do exist with many strains of the German bee, I am not willing to admit that all brown bees possess all these points of excellence; nor am I willing to admit that all strains of Italian bees are lacking in all these points of excellence, and as nine-tenths of the practical apiarists of this country have declared and still claim that the Italian bees are the most superior race ever had in this country, I wish to say that it is "*my opinion*," that he who looks for "the coming bee" through the best strains of a superior race, will far outstrip the one who strives to find it by incorporating into a superior race the blood of an inferior one.

Mr. Heddon desires to cultivate the good qualities of the two races, and leave off the bad. This appears very nice on paper, but in practice presents quite a different picture! So much had been said of imported stock, that in July, 1880, I purchased a selected imported queen, and I reared a few queens from her that season, and a few in 1881, and although she maintained one of the most populous colonies in my apairy during the past season, I did not rear a single queen from her. And if such queens are considered the highest standard of imported stock, (which they must be,) I am not surprised that Mr. Heddon should have a strain of hybrids that are superior to them.

While I esteem the Rev L. L. Langstroth and his judgment very highly, I recognize the fact that apiarists at the present day have many advantages that Mr. L. did not possess. Mr. L. had but few intellects equal to his own to consult, and a less number of strains of bees to compare with each other; while we have the experience, not only of this great and good man, but of scores of others, and all the appliances that American genius could devise; coupled with a constant importation of foreign bees, and all the improvements that American industry could accomplish. If, with all these advantages, a strain of Italian bees could not be found that is superior to those possessed by Mr. Langstroth during his experiments, then I cannot see how it is that Mr. Heddon can have produced a superior strain of bees in so short a time by crossing the Italian bee with an inferior race.

Bryant, Ill.

For the American Bee Journal.

Comb vs. Extracted Honey.

J. L. GRAY.

Mr. Bussey, in BEE JOURNAL of Dec. 6th, has started a subject of interest to me, and one that I think should have a share of the most careful thought and experiment of our most successful apiarists. The BEE JOURNAL is full of articles on almost every conceivable subject, but this one has not had the attention that its importance should attach to it.

While I shall differ very materially from Mr. Bussey's conclusions, still I am glad he has taken the grounds he has, for, perhaps, it will draw out articles from the most experienced apiarists.

My experience this year, and for the last 7 or 8 years, has established the opinion very firmly in my mind, that I can produce at least three times as much extracted honey as I can of comb honey from the same number of colonies. From 15 colonies run for extracted honey this year, my crop of extracted honey was 3,600 lbs. or 240 lbs. per colony; from over 50 colonies run from comb honey, my receipts were 2,500 lbs., or about 50 lbs. per colony. Of course there was an occasional comb, from some of those that were run for comb honey, taken and extracted, but not enough to materially change the figures.

Now, as to prices: Mr. Bussey says that Mr. Oatman received 20 cts. per lb. for his honey, and, deducting 4 cts. for expenses, leaving him 16 cts. net; it is then double the price received for extracted honey. Mr. Oatman receives an exceptionally good price for his honey, on account of quality and amount; buyers always giving more for large lots than small ones; but even at those figures it is not double the price that I am receiving for my extracted honey at home.

I sent some comb honey and some extracted honey to two of the most prominent commission firms on Water St., Chicago, a short time ago; one of them wrote me the other day that the extracted honey was all sold at 9½ cts. per lb., but the comb honey was unsold. The other wrote me that the extracted honey sold for 9½c.; the comb for 15 cts. per lb. These are fair figures as an example, for the honey was produced from the same apiary, sold in the same market by the same class of men, and collected from the same flowers, at the same time of year.

Now, as to the proper condition of producing and getting in proper condition for market. One barrel, holding 50 gallons or 550 lbs. can be bought for $2, at the most, while to get 550 lbs. of comb honey in good marketable condition, costs, if I count my time anything, $8, at the least.

My 15 colonies that we run for extracted honey gave a profit of $22.80 gross per colony, while those run for comb gave $7.50 gross. Taking out the actual cost of each, for getting in condition and marketing, you can very clearly see where they would come out.

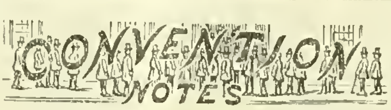
There are some mitigating circumstances in these figures, which would help the showing of the comb honey side, which I have not mentioned, such as increasing; the colonies run for extracted honey did not increase very much; while those run for comb honey have nearly all swarmed once; but they had the advantage of having all the honey gathered by their increase accounted for.

Mr. Bussey will probably want to know why I ran 50 colonies for comb honey and only 15 for extracted, if I knew that extracted honey paid so much the best?

To this I can only reply that circumstances control all of us, to a certain extent. My fixtures were all gotten up for comb honey production, and having, some years, 80 to 150 colonies to look after alone, I can care for them during the busy season, a good deal easier by running them for comb honey than for extracted. If I were trying to make the best showing possible for one apiary, I would not have over 50 colonies of bees in it; I would not allow them to increase at all, and I would run them all for extracted honey.

I hope to hear from others on this subject, and I will close by saying that I had some 12 or 15 colonies in my yard run for other purposes than honey-producing that I did not count. I now have 138 colonies in winter quarters.

Lee Centre, Ill.



Local Convention Directory.

1883. *Time and Place of Meeting.*

Jan. 2-4.—Eastern N. Y., at Albany, N. Y.
E. Quakenbush, Sec., Barnerville, N. Y.
9.—Cortland Union, at Cortland, N. Y.
M. C. Bean, Sec., McGrawville, N. Y.
9.—Ohio State, at Columbus, Ohio.
D. Spear, Sec., Curdington, Ohio.
9-11, Northeastern, at Syracuse, N. Y.
G. W. House, Fayetteville, N. Y.
10, 11.—Indiana State, at Indianapolis.
Dr. J. H. O'Rear, Pres.
11, Nebraska State, at Wahoo, Neb.
Geo. M. Hawley, Sec.
16,—N. W. Ill. and S. W. Wis. at Freeport.
J. Stewart, Sec.
18, Champlain Valley, at Middleburg, Vt.
T. Brookins, Sec.
19, 20.—Mahoning Valley, at Berlin Centre, O.
L. Carson, Pres.
20.—S. W. Mich., at Ann Arbor,
G. J. Pease, Sec., Ann Arbor.
Feb. 3.—Northern Ohio, at Norwalk, O.
8.—Maine State, at Dexter.
Wm. Hoyt, Sec.
April 5.—Utah, at Salt Lake City.
E. Stevenson, Sec.
17, 18,—Texas State, at McKinney.
Wm. R, Howard, Sec.
May 11.—Iowa Central, at Winterset.
J. E. Pryor, Sec.
—, —Texas State Convention, at McKinney.
Dr. W. R. Howard, Sec.
Oct. 17, 18.—Northwestern, at Chicago, Ill.
Thomas G. Newman, Sec.
9, 10.—Northern Migh, at Sheridan, Mich.
O. R. Goodno, Sec., Carson City, Mich.
Dec. 5-6, Michigan State, at Flint.
H. D. Cutting, Sec., Union, Mich.

☞ In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

☞ The Texas State Bee-Keepers' Association will hold its Fifth Annual Convention at McKinney, Collin Co., on Tuesday and Wednesday, April 17th and 18th, 1883; at the residence of Hon. W. H. Andrews.

The following committees have been appointed, and the programme arranged for the next meeting, by the executive committee; viz: on Resolutions; Apiarian Supplies and Exhibits; Subjects for Discussion; and Arrangements, to receive and entertain those in attendance from abroad.

Programme.—President's Address. Subject—State and National Conventions.

Subjects for general discussion:

Essays.—The "Coming bee," W. H. Andrews. Honey plants, Native Horsemints, different varieties, Wm. R. Howard. "Extracted vs. Comb Honey," W. K. Marshall, D. D. "Bee-Moth," W. H. Andrews. "The Queen Bee, her nature and habits, Wm. R. Howard. "The different races of bees in America; their relative value to apiculture," W. K. Marshall, D. D.

Other essays are promised, and a general good time is anticipated. Ample arrangements are made to accomodate those from a distance. Those wishing to place anything on exhibition or correspond with the committee of arrangements, will be promptly attended to, by addressing, W. H. Andrews, President, McKinney, Collin Co., Texas. All other correspondence to the Secretary. We would be pleased to have any one propound questions of interest for discussion, as we have found great interest, as well as valuable information gained by the discusssion of questions contributed to our "Question Box."

WM. R. HOWARD, *Sec.*
Kingston, Texas.

☞ The annual meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held in Temperance Hall, Freeport, Stephenson county, Ill., on January 16 and 17, 1883.

JONATHAN STEWART, *Sec.*
Rock City, Ill.

☞ The Eastern New York Bee-Keepers' Union will hold their 11th Semi-Annual Convention on Tuesday, Wednesday and Thursday, January 2nd, 3d, and 4th, 1883, at the State Agricultural Rooms, State Street, Albany, at 10 o'clock, a. m. All interested in bees are invited to attend.

C. QUACKENBUSH, *Sec.*
W. L. TENNANT, *Pres.*

☞ The Nebraska State Bee-Keepers' Association, will hold its annual session in Wahoo, Saunders county, Neb., commencing Thursday, Jan. 11th, 1883. Arrangements have been made with the railroads to secure 1¼ fare for the round trip. The Saunders county Bee-Keepers' Association will furnish entertainment free to all visiting apiarists. Bee-keepers from neighboring States will be welcomed.

T. L. VONDORN, *Pres.*
GEO. M. HAWLEY, *Sec.*

☞ The Southeastern Michigan Bee-Keepers' Association will hold their annual meeting in the court-house at Ann Arbor, Jan. 20, 1883. All are invited. H. D. CUTTING, *Pres.*
G. J. PEASE, *Sec.*, Ann Arbor.

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☞ The Ohio State Bee-Keepers' Association will meet in Columbus, in the rooms of the *Ohio State Journal*, on Tuesday and Wednesday, Jan. 9 and 10, 1883. A full attendance of members, and all interested in bee-culture, is requested, as matters of interest and importance will be discussed.
Dr. H. BESSE, Delaware, O., *Pres.*
DANIEL SPEAR, Cardington, O., *Sec.*

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☞ The Northeastern Bee-Keepers' Association will hold their thirteenth Annual Convention in the City Hall, at Syracuse, N. Y., on the 9th, 10th and 11th days of January, 1883.

Business of great value to every bee-keeper in the State will be brought before the meeting. Every member is requested to attend and bring their friends, that all may be benefited by the action there taken.

The question drawer will be opened each day, and questions answered and discussed. All are invited to send questions. Appropriate diplomas will be awarded to successful exhibitors of implements, etc. Let all attend.
GEO. W. HOUSE, *Sec.*

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☞ The annual meeting of the Mahoning Valley Bee-keepers' Association will be held at Berlin Center, Mahoning Co., O., in the town hall on Friday and Saturday the 19th and 20th of January, 1883. All bee-keepers are invited to attend and send essays, papers, implements, or any thing of interest to the fraternity. A full attendance is requested of all who are interested. In fact, the meetings will be so interesting that you cannot afford to miss them. We expect a lecturer from abroad on the evening of the 19th. L. CARSON, *Pres.*

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☞ The annual meeting of the Cortland Union Bee-keepers' Association will be held in Cortland, N. Y., on Tuesday, Jan. 9, 1883.
M. C. BEAN, *Sec.*
McGrawville, N. Y.

☞ The annual meeting of the Champlain Valley Bee-Keepers' Association will be held at Middleburg, Vt., on Thursday, January 18, 1883, at 10 a. m. T. BROOKINS, *Sec.*

☞ The Indiana State Bee-Keepers' Association will hold its annual meeting at Indianapolis, Ind., on Jan. 10 and 11, 1883. All are invited.
Dr. J. H. O'REAR, *Pres.*

☞ The quarterly meeting of the Marshall County Bee-Keepers' Association will meet in Marshalltown, Iowa, on Saturday, Jan. 6, 1883, at the Sheriff's office, in the Court House, at 10:30 a. m. The subject for discussion being "Winter and Spring Care."
J. W. SANDERS, *Sec.*

Honey and Beeswax Market.

OFFICE OF AMERICAN BEE JOURNAL,
Monday, 10 a. m., December 25, 1882.

The following are the latest quotations for honey and beeswax received up to this hour:

Quotations of Cash Buyers.

CHICAGO.

HONEY—The supply of extracted honey is fully up to the demand. My quotations are: 7c. for dark and 9c. for light, delivered here.

BEESWAX—It is quite scarce. I am paying 27c. for good yellow wax, on arrival; dark and off colors, 17@22c.
AL. H. NEWMAN, 923 W. Madison St.

CINCINNATI.

HONEY—The demand is good for extracted in barrels as well as in glass jars and tin buckets; arrivals are fair. The demand is fair for comb honey, which, however, is not cheap enough to make trade lively. Extracted brings 7@10c. on arrival; comb honey, 14@20c.

BEESWAX—Is scarce and brings 20@27c. on arrival. CHAS. F. MUTH.

Quotations of Commission Merchants.

CHICAGO.

HONEY—The demand for comb honey does not keep pace with the receipts. There is a large surplus on this market at present, and prices are from 2 to 3c. lower than last month.

We quote: white comb honey, in 1@2 lb. sections, 17@18c. Dark comb honey, hardly any demand. It is held at 12½@15c. Extracted—White brings from 9@10c.; dark, 8@9c.; kegs, half-barrels and casks bring about same price.

BEESWAX—Choice Yellow, 30c.; dark to medium, 18@25c.
R. A. BURNETT, 161 South Water St.

SAN FRANCISCO.

HONEY—Stock is small, with but little demand, and buyers bid low.

White comb, 16@20c; dark to good, 11@14c; extracted, choice to extra white, 8@9c.; dark and candied, 7@8c.

BEESWAX—We quote 25@28c.
STEARNS & SMITH, 423 Front Street.

ST. LOUIS.

HONEY—Dull. Comb, at 16c. for large or hard to 19@20c. for choice bright in small packages: extracted at 8@9c.; strained, 6½@7c.; choice, in smaller quantities, brings more.

BEESWAX—Prime bright steady at 27@28c.
R. C. GREER & CO., 117 N. Main Street.

CLEVELAND.

HONEY Has changed in price a very little, we find it necessary to sell all grades about 1 cent per lb. less. Best white, in 1 lb sections, 20@21c. per per pound; in 2 lb. sections, 18@20c. Extracted is very dull indeed, hardly any sale.

BEESWAX—Scarce, 28@30c.
A. C. KENDEL, 115 Ontario Street.

NEW YORK.

HONEY—There is only a moderate supply of choice to fancy white clover honey, and prices are still held firmly, though the demand is not large. Buckwheat and extracted honey continue slow.

We quote: White clover, first quality, 1 lb boxes, 25c; fair to good, 20@25c.; buckwheat, 1 lb boxes, 17c. Extracted, clover, 13c.; buckwheat, 10c.

BEESWAX—The supply has been light and prime lots held a shade higher.

Western pure, 30@31c; southern, pure, 31@32c.
D. W. QUINBY, 105 Park Place.

BOSTON.

HONEY—Our market is fairly active. We quote: ½ lb. sections at 30c.; 1 lb. sections, 22@25c.; 2 lb. sections, 20@22c. Extracted, 10c. per lb. Good lots of extracted are wanted in kegs or barrels.

BEESWAX—30c.
CROCKER & BLAKE, 57 Chatham Street.

◆

☞ May we ask you, dear reader, to speak a good word for the BEE JOURNAL to neighbors who keep bees, and send on *at least one new* subscription with your own? Our premium, "Bees and Honey," in cloth, will pay you for your trouble, besides having the satisfaction of knowing that you have aided the BEE JOURNAL to a new subscriber, and progressive apiculture to another devotee.

SELECTIONS FROM OUR LETTER BOX

Duty on Beeswax.—I see that beeswax is in the tariff list of chemicals, and is to be assessed 20 per cent. in the new tariff bill. The home supply of wax is not large enough to furnish wax for comb foundation, and the demand for foundation is rapidly increasing. This means a big raise in the price of wax, and also in comb foundation. Chemical and mechanical purposes will use some, and must have it. Comb foundation manufacturers and dealers would make as much with lower-priced wax. Bee-keepers would use more of it and succeed better. The burden will be heaviest on the users of foundation. Cannot something be done to let the wax be imported free of duty.
C. E. MEAD.
Chicago, Ill., Dec. 14, 1882.

[We get but little beeswax from foreign countries, and none from Europe; to the latter, however, we export large quantities of our brightest yellow wax.

The law of "supply and demand" will regulate the price; and, as the value of beeswax increases here, on account of bee keepers becoming consumers, instead of producers, the foreign demand will be less, and thus prevent its rising to such figures as it would if the European markets were constantly demanding all we had in stock. We do not see, therefore, that the tariff cuts any figure in the matter.—ED.]

Correction.—On looking over the AMERICAN BEE JOURNAL, No. 50, just received, I notice on page 795, 2nd column, 3d line from the top, what may be a typographical error. The word "heated" should be *breathed*. And in the 6th line from the top, "inhaled" should be *exhaled*. See the passage near the foot of page 728, 2nd column. Possibly it was misquoted by Dr. Oldham. It might be worth while to correct these errors. If there is any good in it, give it a chance; if not, it will not be necessary to strangle it.
S. CORNEIL.
Lindsay, Ont., Dec. 15, 1882.

[It was an error in the copy; we printed it as it was written. It was an oversight, of course.—ED.]

My Report for 1882.—I started, last spring, with 11 colonies; all middling strong, until May 28, when on account of cold and wet weather, I came near losing 5 out of the 11; but, by feeding them I brought them through, and got 1 swarm from each. The strongest commenced swarming on May 14, and from that time until May 22, I got 5 swarms; they commenced swarming again on June 21, and continued until

Sept. 14. Which gave me No. 74. I took up 1, doubled 2, and have 71 left, all in good condition, and will average 25 lbs. of honey more than they need to winter on. I took off over 1,500 lbs. of honey, nearly all in 1½ lb. sections, and sold it for 15c. per pound. The swarms were all natural except one.

M. H. LEWIS.

Greentop, Mo.

Bees Have Dysentery.—The bees in this locality are badly affected with dysentery, having had no flight since winter began. J. A. BUCKLEW.

Clarks, O., Dec. 16, 1882.

2,000 Pounds of Honey from 9 Colonies.—I started with 10 colonies last spring, sold one, leaving 9; increased to 31; took from them 2,000 lbs. of honey. The last swarm was hived Aug. 28, which filled its hive, besides giving some surplus.

GEO. BISCHOFF.

Burlington, Iowa, Dec. 15, 1882.

Breeding in the Fall.—Upon examining my bees, on the first of Nov., I found no brood of any kind. What does that indicate? I have kept bees for five years, and it is the first I remember of finding them without brood that time of the year. I extracted on Sept. 15. I winter on their summer stands and have never lost a colony. I pack them all round with hay, except the front; that is exposed to the weather. H. A. PIERCE.

Fremont, Neb.

[All well-behaved bees cease to breed in the fall, and by "the first of November," there ought to be no brood in the hive.—ED.]

Moving Bees.—I moved my bees last spring, from Nebraska to Kansas, about 200 miles, but farther than that by rail. I had 11 colonies, spring count; they have increased to 40 by natural swarming, and are all in good condition, strong, with a good supply of honey. I took off nearly 1000 lbs. of surplus honey. From my experience during the past summer, I think bees will do well in this part of Kansas.

G. W. GORUM.

Meredith, Cloud Co., Kansas.

Bees in California.—So far, this fall, we have had three rains. At the present time, vegetation is nicely started, the valleys and hills look nice and green. We had, the past season, ⅓ of a crop; for the past three year we have averaged ¾ of a crop. The year 1879 being the only total failure in this vicinity for the past fifteen years. From the above, we think our location will compare favorably with any portion of the country. Experience has taught us that in a hot, dry climate, like California, bees must be shaded to keep the hive cool, so that the bees will keep to work all day. The hives having no shade, the bees are clustered on the outside, remaining idle on all hot days, between the hours of 9 a. m. and 4 p. m., California is like all other places; to insure success, you have to introduce new tested queens every few years, from some different locality, into your apiary. We find it pays. We have disposed of all our crop, and have all supplies in for another year; all bees are in good condition for winter, every hive having a laying queen and an ample supply of honey. We have some hives on hand, and intend to make 300 new ones. We do not wish much of an increase, and intend to use the extractor freely.

BRAY & SEACORD.

Wartham, Cal., Dec. 5, 1882.

My first Report.—I am well satisfied with my summer's work. I commenced the spring of 1882 with 2 colonies in tolerable condition. I received 5 natural swarms, and one by dividing, making 8 in good condition, and received 200 lbs. of comb honey, or 100 lbs. per colony, spring count. Is that not tolerably good? The honey was in 2¼ lb. sections. I have nearly one-half of it sold at 15 cts. per lb. Old fogy bee-keepers are injuring the market. I can sympathize with Mrs. Harrison, for I have had the same experience. I will give my method for wintering bees on the summer stands in the future. Success to the BEE JOURNAL and its Editor.

S. C. FREDERICK.

Coal Vale, Kansas, Dec. 14, 1882.

A Poor Season.—I cannot get along without the BEE JOURNAL, so long as I keep bees. It has paid for itself many times over, by the instruction it has given me in the care and handling of bees during the past season. I commenced the season of 1882 with 3 colonies; increased to 7, and as this has been a very poor season in this part of the country, I obtained only 50 lbs. of surplus, per colony, spring count. All 7 colonies went into winter quarters in splendid condition, in "Cotton" hives, packed with hay, cut fine with a hay cutter, and on their summer stands. Seeing so much published about Mrs. Lizzie E. Cotton, I decided last fall to visit the lady, and consequently took a journey of 600 miles, and am now able to judge of her, and her method of doing business, based on personal observation. It is enough for the present to say that I returned home with a less favorable impression of her than when I left. A description of what I saw I *may* give you this winter, if desired.

S. H. WOOD.

St. Albans, Vt., Dec. 18, 1882.

Good.—I take this opportunity to extend thanks to you, Mr. Editor, for the many able articles which have appeared, from time to time, in your paper, on all subjects of interests to bee-keepers. I put into winter quarters, in 1881, 4 colonies, and wintered them all successfully. I used cut chaff to pack them with. The size of frames I use is the Cary, 10¾x14 in. My yield for 1882 was 370 lbs. of comb honey, and I increased from 4 colonies to 9, by natural swarming. I obtained that amount of honey under some disadvantages. I was compelled to remove 3 of my colonies to another locality, about 2½ miles, during the best honey flow of the season, but I feel like congratulating myself, taking everything into consideration.

HENRY HARTMAN.

Hokendauqua, Pa., Dec., 14, 1882.

Not Encouraging.—My report for this year is, I think, so very poor that I did not deem it worth sending in, but I could not help that, for the season would not permit me to do any better. Some of my colonies have not gathered a single pound of honey, and hardly enough to winter on; others have gathered a little. The best that any colony did was one of black bees. This colony obtained 54 lbs. in one-pound sections, and it was a swarm on June 15. All the honey that I have obtained from 10 colonies, spring count, was a little over 400 lbs. The clover honey I sold for 20 cts. per lb., and buckwheat honey I sold for 16 cts. I hope for a better crop in Western Pennsylvania next season.

C. M. CLARK.

Lincolnville, Pa., Nov. 27, 1882.

Water in the Bee Cellar—The BEE JOURNAL makes its regular weekly visits, and has become a necessity. I could not well do without it. My bees are enjoying their winter rest in the cellar, with plenty to eat and nothing to disturb them. I can endorse the methods described by Mr. Ira Barber, of DeKalb, N. Y., for wintering bees, having perused the same course for a number of years without loss, often with 6 inches of water in the cellar. I believe water is a benefit to them, although writers generally advocate a dry atmosphere. There are but few bees in this township besides my 45 colonies. There are 2 or three box-hive men; quite enough to keep up the supply of moth. They will not learn anything better.

L. EASTWOOD.

Waterville, O., Dec. 19, 1882.

Snow three feet Deep.—I have kept bees for 50 years, but do not see how I can get along without the BEE JOURNAL. The experience of the many is what we want to know in any business. The past year was the poorest, but one, for honey during the past 50 years, but I look for a good honey season next year. The bees are now snowed under, 3 feet deep. I have always noticed that a good honey season follows a "snug" winter, and a poor one after a mild and open winter. I wish the BEE JOURNAL came twice a week instead of weekly.

T. A. C. EVERETT.

Randolph, N. Y., Dec. 18, 1882.

Good Increase.—My brother and myself commenced the last spring with 19 colonies; two swarms escaped to the woods; we have now 45, packed in chaff and saw-dust. All are Italians but 8 colonies. We use the Langstroth hive, but had no extractor, so that our hives are now full of honey. We had some honey in sections, besides the increase.

WM. WHIPPS.

Carlisle, Ind., Dec. 19, 1882.

GENERAL INDEX FOR THE YEAR 1882.

Adulteration—
- Fraudulent uses.................. 658
- Effects. 500
- Glucose, 33, 66, 147, 150, 193, 226, 241, 280, 322, 338, 371, 372, 386, 450, 578, 611.............. 674
- Glucose factory failures...... 754
- Glucose-honey question...... 341
- Laws against.......11, 197, 227, 580
- Novice on 20, 516
- Of Food, 37, 51, 146, 147, 186, 241, 273, 293, 338, 355, 403, 417, 450, 516, 595..................... 740
- Of Honey, 51, 184, 211, 214, 338, 341 386, 705........................ 755
- Oleomargarine............ 339, 317
- Saccharine secrets............ 434
- Sugar meal...... 531
- Test of..................102, 610, 649

Bee Enemies—
- Bee lice........................... 619
- Bee moth....204, 219, 250, 426, 731
- Birds... ....347, 380
- Blister-beetle 614
- Mice........... 715
- Oil beetle....................53, 92
- Roaches.......................... 236
- Scorpions.......... ....583, 649
- Skunks............................ 27
- Snakes 281
- Toads 547, 603

Bee Journal—
- Appreciated, 11, 12, 13, 29, 34, 45, 75, 145, 226, 241, 330, 385, 620, 747........................... 795
- Addressing letters....323, 531, 625
- Better size..........33, 45, 148, 178
- Better than a monthly......49, 122
- Binding.......................187, 218
- Free advertising.............. 313
- Malicious attacks.. ..225, 289, 290
- Monthly 609, 667
- New year's greeting 3
- Questionable copying from.65, 410
- Removal......................257, 274
- Retrospective, prospective... 817
- Valuable to advertisers, 226, 241, 747 795

Bee Literature—
- Alley's new book............... 753
- American Bee-Keeper, 20, 49, 205.............................. 705
- Bees and Honey......208, 417, 603
- Bee-Keepers' Exchange...... 20
- Bee-Keepers' Guide........... 49
- Bee-Keepers' Instructor...20, 658
- Books lost in the mail......... 524
- British Bee Journal............ 737
- California Apiculturist........ 98
- Cook's Manual.............422, 449
- Doolittle's Catalogue.......... 23
- Honey as Food and Medicine 385
- Juvenile Gleanings............ 274
- Kansas Bee-Keeper........... 20
- Necessary to success 52
- New Eng. Bee Journal..20, 49, 514
- New Publications, 385, 397, 401, 417, 422, 435....................... 444
- Patrons' Guide................. 20
- Publishing a weekly........... 290
- Sir John Lubbock's new book. 738
- Too many bee papers......... 24

Bees and Bee-keeping—
- A bee lawsuit in Germany.... 275
- A beginner's troubles.......40, 587
- A cat's experience............. 99
- A day with Mr. Heddon....... 469
- A disturbance in Cyprus 513
- Advancing the science of..... 630
- Advice to beginners, 107, 150, 181, 283, 300, 587, 698, 730, 791, 810
- A floral city...................... 236
- A friendly chat.................. 424
- After-swarming........ ..426, 459
- A hobby.......................... 68
- Albino bees..170, 186, 199, 250, 306
- A lesson from bees............ 486
- All swarms and no honey..... 522
- Almost persuaded... 418
- Amiability of bees 295, 427
- Amusement of a mule........ 404
- Ancient history..............5, 455
- Ancient regulations........... 452
- An important circular......... 561
- Ants in apiary.29, 76, 169, 547, 580
- A partial review 115, 344, 505
- A peculiar incident............ 359
- A phenomenon 596
- Apicultural botany...449, 466, 570
- Apis dorsata..................... 405
- Apis mellifica....485, 523, 536, 566
- Are bees a nuisance?......... 87
- Are bees taxable?............. 516
- Arkansas brown bees.......... 218
- Artificial swarming...210, 235, 259, 360, 469, 519 633
- A sad accident 427
- As an industry........4, 42, 92, 106
- As a specialty...............37, 473
- A scientific pleasantry....370, 396
- A visit to Baltimore........... 453

Bees & Beekeeping—*continued*
- Bacteria and Bee Bread ..122, 170 212 379
- Bee and honey thieves 682
- Bee farming and pasturage... 133
- Bee-keeper's compass......... 133
- Bee-keepers' mistakes....... 106
- Bee-keepers' visits........660, 726
- Bee-keeping and other pursuits............................. 505
- Bee-keeping and what?....... 473
- Bee notes........ .....326, 409, 434
- Bees and Bears..... 457
- Bees and Grapes..29, 172, 185, 204, 215.......................... 597
- Bees as defenders.............. 803
- Bees as tipplers 451
- Bees as weather prophets..... 244
- Bees beautiful in color.7, 167, 219
- Bees deserting the hive.... . 442
- Bees destroying brood........ 587
- Bees for business 742
- Bees going into other hives... 475
- Bees improved by handling... 427
- Bees moving eggs in cells..... 819
- Bees on a spree 587
- Bees on a railroad signal..... 532
- Bees on shares.................. 809
- Bees poisoned 617
- Bees resenting an insult 339
- Bees storing extracted honey 266
- Bees' tongue register.....257, 263
- Beeswax and pollen........... 481
- Bianchi's apiary (illustrated). 211
- Blunderers in high places. ... 243
- Breeding ..7, 21, 22, 44, 67, 105, 115, 118, 195, 213, 279, 299, 379, 392, 500 508
- Breeding without pollen...... 627
- Brood rearing in wired cells.. 217
- Building combs 627
- Building straight combs..235, 372
- Buying bees................202, 244
- Call things by right names.... 289
- Canadian Bee Co................ 23
- Census report 546
- Champion colony 651
- Chilled brood and robbing 714
- Chinaman's version 340
- Cleaning moths out of comb. 603
- Clearing combs of dead bees 61
- Cold weather, 241, 266, 281, 283, 297, 298, 300, 314, 332, 348, 395, 443, 476........................... 743
- Conflicting theories...178, 231, 276, 308, 343.................... 424
- Conundrums..................... 634
- Cowardly bees.................. 714
- Criticisms........... ....84, 228
- Crooked combs............123, 587
- Crosses of bees........551, 552, 556
- Curiosities of bees........ 371, 387
- Curious observations of an early writer...................... 772
- Curious statistics............... 340
- Customs duties............ 522, 823
- Cutting out drone comb....... 30
- Cyprian bees. 135, 147, 267, 278, 299, 315, 360, 388, 419, 423, 467, 468, 555, 708.............. 791, 820
- Dairy *vs.* apiary.......124, 166, 453
- Dead brood in cells........123, 140
- Death of A. F. Moon.......... 499
- Death of Edward Townley... 481
- Death of Jasper Hazen....... 242
- Death of Jesse C. Estlack.... 513
- Death of Longfellow.......... 209
- Department of apiculture. 433, 465, 471, 498, 501, 503......... 577
- Detailed work 171, 216, 490, 601, 684 697
- Development of bees.......... 584
- Different kinds of bee-keepers 758
- Disposition of bees............ 490
- Distinguished visitors......... 451
- Dividing and introducing. 523, 569
- Dividing for increase. 124, 170, 194, 217, 234, 299, 472......... 569
- Do bees hear?.... 803
- Do bees injure fruit?. 130, 163, 356, 436 597
- Does it pay?.. 11, 13, 30, 44, 60, 297, 490............... 667
- Doolittle's method............. 424
- Doolittle's report for 1882.... 696
- Doubling up colonies..29, 154, 468, 475.......................... 617
- Drones. 26, 40, 122, 315, 378, 402, 437, 458, 466, 472, 475, 490, 515, 642
- Drone traps................313, 458
- Dry powder excretion. 214, 276, 374, 467, 474, 534, 626......... 627
- Dwindling.........162, 180, 378, 411
- Dying in winter 60
- Dysentery. 29, 38, 139, 152, 164, 167, 212, 391, 444, 475, 483, 508, 523, 538...........................612
- Dzierzon theory..277, 372, 539, 731
- Early drones 202, 236, 348..... 410
- Early swarms. 235, 250, 251, 265, 266, 280, 282, 298, 315, 331, 348, 412
- Early work....................... 281
- Effects of climatic changes 170, 330, 411................. 600
- Effect of cold weather 265, 300, 307, 331, 363, 378, 380, 460, 475, 566

Bees & Beekeeping *continued*
- Electric alarm.................... 708
- Entomological..............490, 524
- Excessive swarming..315, 555, 556, 570, 588.................... 603
- Experience of beginners...30, 60, 203, 442, 715 810
- Experience with the new bees, 708, 820..........................821
- Experiments................296, 626
- Experiments in comb building 627
- Fall management 740, 824
- Fecal discharge in hive 58, 467, 534
- Feeders..............51, 61, 98, 227
- Feeding 427, 474, 587, 602, 603, 642, 678
  - Amber cane syrup.......554, 619
  - Cleansing barrels for........ 171
  - Candy 140
  - Glucose 342
  - Maple syrup.........108, 219, 508
  - Rye meal...................... 170
  - Sugar........29, 203, 307, 410, 619
  - Syrup... ....186, 187
  - When....... 603
- Fences around apiaries...169, 203
- Fertile workers...296, 326, 377, 396, 407, 434, 443, 444, 475, 476, 523, 531, 536.................... 571
- Fertilization of queens....... 628
- Floating apiaries 300, 331
- Follow a well-digested plan.. 772
- Food for shipping cages.... .. 666
- For pleasure...............219, 473
- For profit. 71, 137, 156, 188, 292, 422, 436, 554, 618, 651......... 805
- Foul brood 8, 41, 56, 72, 103, 115, 135, 522, 634, 647, 663, 761.... 763
- Foul brood inspector...... ... 458
- Gap in the honey season..514, 550
- Gathering pollen............... 468
- Give us all the facts........... 139
- Gnawing off combs............ 267
- Gold dollars *vs.* gold bands... 524
- Good increase... 380
- Handling without smoke....7, 202
- Harmless moth................ 602
- Heath and Caucasian bees.... 373
- Health of Rev. L. L. Langstroth. 500
- Heddon's apiary............... 469
- High water ravages........... 249
- Hints to beginners...291, 374, 422
- Historic scraps................ 325
- History and antiquity......... 439
- Hiving..... 379
- Honey and money............ 805
- Honey bound............... .. 618
- Honey production in Penns.. 724
- How far can bees see?........ 378
- How to get bees off sections.. 678
- Humor practically applied.... 535
- Humorous.................. .. 355
- Hunting wild bees.........361, 408
- Hybrids.......................... 506
- Hybrids as honey gatherers 13, 156
- Ice attracting moisture........ 170
- Ignorance of the past ages... 770
- Improved races of bees..9, 13, 45, 85, 97, 175.................. 242
- Improving Italian bees 166, 263, 821
- In Alabama...................... 348
  - Arkansas 426, 506
  - Australia 102, 168
  - California. 49, 75, 171, 251, 267, 282, 362, 386, 387, 436, 444, 452, 453, 456, 488, 516, 612, 691, 693.................... 624
  - Canada. 72, 170, 297, 348, 444, 491, 534, 588, 620, 699....... 746
  - Ceylon 435
  - China.......................... 755
  - Colorado....49, 234, 245, 296, 316, 353, 506, 585............ 618
  - Connecticut.............689, 693
  - Cyprus 69
  - Dakota....................298, 695
  - District of Columbia........ 74
  - Egypt......................... 483
  - England, 4, 20, 82, 290, 305, 407, 561
  - Europe...............114, 131, 291
  - Florida. 9, 13, 35, 179, 233, 330 356, 451......................... 506
  - France 131
  - Georgia......12, 124, 347, 466, 693
  - Germany........353, 355, 483, 698
  - Illinois. 156, 524, 550, 570, 587, 634
  - Indiana. 444, 476, 491, 500, 524, 540, 571..... 587
  - Iowa...396, 534, 554, 569, 570, 588, 693, 699.................. 744
  - Ireland........................ 307
  - Kansas..11, 186, 252... 568
  - Kentucky...74, 155, 170, 186, 281, 380, 426, 442, 459, 568,.. 665
  - Louisiana 92, 130, 168, 297, 377
  - Maine. 170, 216, 422, 491, 695, 755
  - Maryland 61, 969
  - Massachusetts, 76, 235, 283, 459, 487
  - Michigan.......427, 476, 555, 651
  - Minnesota.................236, 651
  - Mississippi..135, 314 501
  - Missouri.....10, 554, 556, 570, 694
  - Nebraska, 155 182, 235, 570, 596, 665
  - New England.................. 505
  - New York..76, 330, 435, 458, 460, 487, 491, 523, 536, 539, 540, 556...................... 571

Bees & Beekeeping—*continued*
  - New Jersey.................... 75
  - Ohio.............443, 540, 568, 586
  - Oregon......................170, 556
  - Palestine........................ 568
  - Pennsylvania 571, 620
  - Scotland.....................337, 348
  - South Carolina................ 460
  - Sweden.......................... 362
  - Switzerland...............615, 658
  - The East....................327, 419
  - The Northwest............... 597
  - The South..................... 667
  - Tennessee................ 74, 139
  - Texas. 171, 181, 202, 250, 251, 290, 310, 314, 325, 332, 380, 453, 454......................... 570
  - Utah..124, 315, 410, 522....... 661
  - Virginia 298
  - Wisconsin 523, 695
- Insects around hives. 267, 298, 300, 331.......................... 379
- Instinct of Bees 721
- Inter-Breeding................. 712
- Introducing queens without cages... 789
- Italian bees wanted............ 394
- Italianizing...... 360, 482, 540, 571
- Italians as robbers............ 441
- Italian bees in England....... 307
- Italians *vs.* blacks....313, 342, 571
- Italians *vs.* Cyprians..278, 295, 315
- Jones' new departure... 23
- Judge Andrews' lecture 281
- Keeping bees on stilts......... 71
- Labor of bees................... 483
- Ladies' success.............219, 667
- Lamp moth traps.............. 426
- Langstroth fund............... 689
- Language of bees.............. 787
- Late swarms......538, 579, 586, 614
- Leather-colored bees 513, 533
- Lee's apiary.................... 596
- Length of bee's tongue....... 294
- Light and dark strains of Italians.........213, 261, 376, 405, 485
- Location of an apiary.....121, 293
- Location of pure air in rooms. 582, 644, 651, 697
- Longevity of bees... 100, 516, 613
- Mailing bees to Canada........ 517
- Making nuclei and queen cells, 757
- Making tin cans tight......... 692
- Management...37, 52, 171, 244, 340, 390, 516, 601, 661, 759.... 810
- Manipulating bees....329, 372, 458
- Maturing spring plans. 99, 131, 359
- "Miner" points................ 178
- Modern breeding of bees..... 613
- Moldy combs..............156, 188
- Moving hives......61, 208, 379, 601, 618, 634, 644.............. 824
- Much more to learn... 601
- Natural bee hive........... ... 761
- Negroes as bee-keepers...378, 435, 491, 502...................... 596
- New courage for next season. 395
- Non-swarming bees 804
- Nuclei.......................604, 634
- Numbering hives.............. 122
- Old combs.....92, 282, 522, 617, 762
- Old fogy bee-keepers. 172, 340, 388, 579, 795...................... 805
- Onions for uniting bees....... 661
- Open secrets..................... 436
- Overstocking a locality...... 792
- Parthenogenesis....42, 53, 107, 120, 230, 347, 406................731
- Past, present and future...... 807
- Peculiarities of bees........24, 611
- Peppermint to prevent stings 714
- Phenomenal..................... 380
- Poisonous gases around hives 649
- Pollen baskets................. 75
- Pollen-gathering 169, 566
- Pollen theory. 44, 140, 151, 152, 235, 266, 347..................... 483
- Poor queen—no colony. 345
- Poultry and bees............... 138
- Practical co-operation........ 546
- Practical hints........181, 474, 730
- Preserving late swarms....... 579
- Prevention of swarms. 12, 116, 362, 426, 474, 613............. 677
- Progressive bee-keeping...60, 73, 100, 167, 201, 275, 407, 457, 474, 501, 599, 666, 710, 724, 730, 811
- Prospects, 65, 170, 290, 369, 379, 385, 396, 401, 410, 412, 435, 442, 457, 459, 460, 507, 508.......... 571
- Purity of Italian bees. 70, 105, 214
- Qu'n-cell from fertile worker. 475
- Queen overlooked. 634
- Railway apiary.................. 757
- Recapping a queen-cell....... 555
- Register for apiary......10, 33, 35, 66, 118 217
- Reply to Mr. Vandervort...... 539
- Reports of honey crop....691, 693
- Reproduction................... 315
- Returning swarms.........507, 581
- Review of the season..74, 101, 634, 646 664
- Robbing. 264, 300, 315, 331, 412, 440, 524, 540, 567, 602.......... 714
- Sagacity of bees......563, 786, 795

Bees & Beekeeping—*continued*
Search for Apis dorsata....... 692
Seasonable hints..131, 148,468, 490.............................. 691
See that bees have honey 275, 300
Shipping bees to Australia.... 660
Shipping bees on cars.....747, 778
Shipping bees to India 484
Signing notes................ 21
Silver linings.305, 482, 507, 540, 586
Size of colony.................. 474
Slovenly bee-keepers.....181, 245
Song of the bees. 343
Starvation................ 152, 587
Statistics.460, 529, 561, 662, 681, 706, 712, 722, 761.............. 793
Stewart's apiary............... 533
Stings 24, 73, 155, 181, 267, 298, 307, 342, 491, 500, 642, 683 ... 714
Stray swarms.136, 172, 283..... 421
Sunnyside apiary............. 325
Superiority of Italians.283,455, 580
Swarming....299, 469, 475, 508, 519, 522, 539, 586, 634, 778.....805
Swarm'g perplexities..556,564, 587
Swarming *vs.* dividing.....723, 730
Swarm on a telegraph pole....435
Syrian bees ...60, 114, 117, 137, 147, 186, 200, 232, 266,291, 331, 419, 427, 455, 516, 593, 675,708, 742............ 791
Telephone for apiary.......... 147
That long day with Mr. Clarke 517
The ariel of spring......... 259
The coming bee...22, 212, 294, 377, 596, 743.................. 773
The coming winter. 721
The "King Bee" 227
Theory not infallible.......... 377
The yellows in peaches........ 634
Things by their right names.. 289
Too much honey............... 211
To the law and testimony..... 166
Transferring..44. 423, 425, 434, 437, 490, 506, 508, 520, 523,533, 538
Transformations............... 791
Travelings in America....507, 650
Undersized bees 92, 154
Understanding a location..... 598
Unfortunate.................... 330
Unkind personalities......673, 674
Uniting bees.458, 472, 519, 522, 661
Unused honey resources...... 404
Wants a society........ 684
Wasted Bloom 409
Watching the bees.........259, 404
Water for bees...265, 314. 361, 404
Weather predictions..113, 138, 305. 354, 369, 435, 508, 530,563, 571.............................. 723
Welcome spring................ 172
What bees accomplish......... 771
Who gets the profits?.......... 386
Wintering and springing. 794
Wise precautions 531
Work during May in Texas... 325
Worker bees in queen-cells... 362
Workers........................ 472
Worms in Pollen...... 746
Yellow races of bees..83, 214, 551

Comb Foundation—
Advantages 182, 407, 444, 476,627, 679
Dunham.....................520, 585
Experiments....... .... .6, 86, 361
Fastening in frames 35, 114, 115, 129, 185, 187, 227, 309, 347, 370. .. 439
Fresh made...................101, 169
Given........72, 471, 520, 549, 585, 732
Machines................... . 695, 648
Manufacture.4, 13, 219, 444, 504, 595, 648 746
Thin for surplus 119, 427
Vandervort 507
Wired.......44, 120, 129, 193, 427, 549

Conventions—
Advice about.... .... 50, 650
Chicago convention............726
Questions 615
Reports—Austro-German..... 59
Barren co., Ky................. 247
Bee-keepers Union.......... 98
British 577
Caledonian...............545, 553
California 27
Canadian 641, 643, 651
Central Michigan........280, 632
Colorado....................... 27
Eastern Michigan........264, 291
Eastern New York........... 132
Florida......................... 610
Haldimand, Ont............... 729
Indiana..................52, 105, 579
International, at Milan, Italy 540
Iowa Central.................. 761
Kentucky Union............. 292
Louisiana...................... 615
Lebanon, Ind................. 680
Madison, Wis.................. 409
Maine 361, 760
Marion Co., Ind.............. 216
Marshall Co., Iowa... 197
Maryland, Va., and W. Va.. 280
Michigan..................785, 791
Nebraska....... 116
New Jersey...................12, 196
North American....306, 449, 468, 499, 521, 609, 624, 626, 646, 657, 662, 665 673
Northeastern, N. Y....43, 81, 84
Northeastern, Wis.12. 67, 98, 102
Northern Michigan 331
Northern Ohio................. 711
Northwest'n, 563,673,675,692, 754

Conventions—*continued.*
N.W. Ill. and S.W.Wis...323, 330
Northwest'n Wisconsin..43, 409
Ohio 581
Oregon................ 776
Saunders Co., Neb.......264, 680
Southern California.....711, 776
Southeastern Michigan...... 5
Southwestern Iowa.......... 43
Swiss 615
Texas.... ....393, 730
Tuscarawas and Muskingum, Ohio 313
Utah..... ....307, 312, 713
Ventura Co., Cal............. 458
Western Iowa 387
Western Michigan... .. 346, 360
West Texas...............600, 745

Hives and Implements—
Ancient hives 456
Best hive for surplus........68, 139
Best hive for winter.. ....172, 299
Bottom bar of frames..... ... 666
Box hives..... 340
Broad frames....306, 490, 524, 634
Common-sense hive... ...519, 585
Cover for hives.................. 538
Deane's surplus arrangement. 245
Division boards 218
Double-walled hives.......... 235
Ekes and nadirs................ 182
Entrance-regulating bottom,. 715
Fisher's hive...............235,282
Golden hive 266
Half-pound sections......792, 802
Heddon's honey board....156, 201
Honey evaporator............ 405
Hooks for tops of frames..... 603
Improvements in hives........ 203
Langstroth hive and frame.38, 91, 124, 251, 283, 299, 329, 444, 469
Long-idea hive................ 202
Manum's hive............539, 570
Metal Rabbets.................. 155
Movable-frame hives.... 459
Muth-Rasmussen's hive...... 261
One-piece sections.56,123, 130, 136, 140, 162.................... 568
One-pound sections.......148, 792
Paint for hives............236, 539
Penny Packages for honey... 802
Position of hives 582
Priority in use of sections ... 258
Reversible frames.108,180,187, 208, 533......................... 540
Reversible honey extractor.. 756
Revolving frame-holder...... 744
Sectional honey boxes..54, 60, 119, 161, 245, 249,342, 378,456, 522, 565, 568, 666........ 715
Separators.65, 101, 120, 300,456, 679.......................... 792
Shade for hives,...... 310, 491, 538
Shipping crates................ 540
Side and Top Storing......... 792
Smokers..137, 161, 203, 279,294, 314, 379, 467, 468.......... .. 677
Space around the frames..12, 235
Standard Frame..179, 212, 227, 241, 326........................ 674
Stone platform for hives...... 811
Summer and winter hives.... 41
The coming hive.............. 39
Thin *vs.* thick sections....297, 792
Unicomb sections............ . 449
Uniform frames desirable.... 5
Ventilation of hives......... 819
Wiring frames............569, 642
Wood separators............... 820

Honey and Bee Shows—
Advantages............356, 467, 547
American......................... 547
Baltimore 641, 683
California......................... 325
Denver, Colo. 282
Effects of..... ....756, 785
England.177, 275, 325, 484, 531, 547
Exhibits and premiums 11, 20, 34, 49, 146, 324, 521.... 803
Fairs.356, 403, 404, 436, 465, 467, 470, 503, 521, 530, 561,586, 625, 665............. 696
How to exhibit, 324,521,563,569,570
International, at Hamburg... 755
Management.34, 275, 307...... 324
Michigan 530, 620
Norfolk, Ont.................... 532
Philadelphia..................... 549
Scotland 674
St. Joseph, Mo..............546, 666
St. Louis 661
Stratford, Ont.................. 641
Toledo, Ohio.503, 531, 538, 593, 808
Virginia... 722
Wales 422

Honey and Beeswax—
American honey in England.. 787
Artificial comb honey...74, 82, 184, 210, 217, 288, 339. 370........ 396
Best packages for honey....52, 294, 363, 407, 454, 467, 483, 501.... 593
Bitter honey 568, 571, 635
Boiling honey................... 379
Care of comb honey...308, 358, 390, 532. 580
Candied Honey.108, 123, 265,298, 449............................ 715
Cleansing beeswax............ 139
Cleansing wax extractor....... 523
Comb *vs.* extracted honey...8, 55, 278, 326, 408, 631, 678, 773..... 822

Honey & Beeswax—*continued.*
Duty on beeswax 823
Extracting honey.12, 44, 55, 91, 108, 236, 278, 281, 326, 331, 378, 387, 518, 530, 588................ 650
Foreign demand for honey.... 257
Glass *vs.* tin for honey......... 454
Grafting wax 259
Honey ants 536
Honey as food.12, 37,82,163,483. 580
Honey as medicine...12, 30, 82, 818
Honey dew.....556, 568, 570, 635, 790
Honey Harvest 13, 19, 60, 72, 76, 92, 148, 182, 185, 202, 267, 331, 362, 369, 418, 450, 519, 538, 540, 570, 571, 586, 587, 588, 611, 620,634,652, 658, 662, 667, 707, 711 824
Honey Labels..75, 92, 98,107,123, 434
Honey Label Paste............ 123
Honey Wine............50, 339, 395
Immense honey crop in Texas 454
Interior Honey................. 603
Large honey yields.124, 411,707, 714, 745, 762, 769.............. 824
Management of comb honey. 45, 83, 133, 198, 229............ 260
Management and care of extracted honey.......8, 55, 278, 699
Marketing honey.. .13, 235, 296, 374, 422, 459, 571, 578, 594, 646, 684 705, 711, 745, 771 801
Peculiar honey................. 411
Production and sale of honey. 30, 83, 133, 198, 229, 260, 360, 548, 565, 567, 745, 787....... 791
Prospects 115, 124, 154, 162, 197, 217, 225, 249, 251, 299, 307, 331,353, 363, 369, 387, 395, 411, 443, 452,459, 487, 490, 497, 524, 539........... 594
Purity of honey... 690
Scarcity of beeswax 327
Southern honey 372
Statistics...548, 561, 562, 706, 755, 772
Store room for honey......... 266
Strained *vs.* extracted honey.. 724
Swiss honey harvest 611, 658
Test for honey.................. 610
Test for beeswax............... 698
The coming market....374, 459, 578
The honey wave 507, 821
Uses of honey 12, 74, 163
Wax boiling in England....... 21
Wax cappings.........265, 793, 810

Humbugs—
Burch 74
Cotton............40, 91, 170, 218, 295
Doon.............................. 161
Krider 75
Ritchie 763

Pasturage for Bees—
A necessity ....4, 11, 99, 104, 148, 180, 196, 234, 267, 312, 346, 358, 500, 514, 663, 676, 760, 778........ 787
A new clover... ....443, 458, 571
A new plant..................... 522
Bees and bloom. 4, 172, 409
Bees fertilizers of plants 453, 500
Bee pasturage of California.. 456, 488, 582......... 612
Chemical properties of soil.262, 410
Cultivation of honey plants.. 618
Honey Plants—Acacia 456
Alfalfa 281, 456
Alsike clover.291, 346, 676, 689, 794
Antirrhinums 422
Aster..... 236, 603, 651, 666, 667, 747
Baeconia japonica........... 249
Barberry 361, 440
Basswood.35,410,423,427,538,571 715
Bitter sweet...............300, 506
Bokhara clover.............. 568
Buckeye....................... 395
Buckwheat............108, 475, 794
Butterfly weed............466, 537
Catnip.................188, 538, 554
Celandine....................... 586
Climbers........................ 123
Cleome 556
Coralberry............ 185, 538, 570
Corn 219, 330, 456, 556
Crane's-bill 530
Daisies............ 508
Figwort...........474, 518, 555, 570
Giant hyssop............... .. 650
Golden honey plant..107, 514, 517, 567............................ 652
Golden rod....555, 586, 587, 603 619
Grindelia squarrosa.......... 651
Honey mulberry.............. 619
Horsemint 794
Honey locust.....296, 396, 418, 423
Laurel 249
Maple........................... 217
Mignonette...................12, 138
Milkweed..................332, 537
Mint..........................539, 731
Motherwort..410, 427, 443, 476, 491, 536.......................... 603
Osage orange.................. 411
Partridge pea.................. 466
Persimmon 75
Phacelia purshii............... 347
Potatoes......................... 104
Raspberry. 11
Rape............................. 794
Red clover...........186, 378, 441
Saw palmetto.................. 282
Scotch heather 3
Sweet clover.10, 20, 35, 61, 113, 137, 148, 155, 186, 219. 266, 314, 231, 346, 347, 481, 556, 562, 642, 667, 676, 714, 730, 746, 786, 793, 818

Pasturage—*continued.*
Smart weed..................... 586
Sterculia 442
Thyme........................... 29
Tila Americana........... 348
Vervain 537, 540, 569
Washington bower............ 633
White clover,61,395,412,427,539, 603
Wild bergamot................. 537
Wild camomile........ 568
Wild honeysuckle.... 362
Willow.......................... 788
Wistaria............... 235
Yellow mellilot 611,666
How to gather sweet clover... 571
How to sow..................... 727
New foreign honey plants.. .. 674
Notes on honey plants.....517, 602, 635............................ 699
Ornamental pasturage.. ..337, 339
Planting.....................545, 556
Plenty of bloom.... ......267, 410
Questions on honey plants 473, 545
Seeding an orchard........... 555
Sowing alsike clover.......... 689
Sweet clover as a honey-producer ....171, 523, 688.......... 618
Sweet clover as stock pasture. 10
Sweet clover in the woods... 377
Tree planting...... 423

Queens—
Clipping the wings of...12, 187, 200, 251. 361, 417,421, 501, 554, 724, 792
Crowders........................ 131
Crumbs for the curious........ 534
Deserting the hive............ 44
Dollar.104, 145, 149, 151, 177, 195, 231, 235, 289, 321, 330, 343, 345,376, 392, 393, 436, 485, 520,620, 775.... 788
Doolittle's method of rearing. 454
Drone layers... ....75, 586
Eggs duplicated in cells....... 363
Eggs laid in queen-cells....... 37
Eggs removed by workers..... 152
Excluders.................... 30, 172
Fertilization........311, 343, 588, 789
Functions of.................311, 472
Good ones necessary...315, 363, 424
Importation of...............34, 104
Introducing....108, 229, 249, 357, 424, 426, 437, 507, 643, 759.........774
Lamp nursery.................. 291
Late breeding................... 699
Leading the swarm.........611, 707
Loss of.......................377, 385
Poor queens 474
Prolonging life of............. 438
Queen-cells 267
Queen feeding a drone 265
Queenlessness... 283
Queen-trap 353
Rearing...9, 86, 137, 199, 226, 265, 316, 341, 347, 354, 357, 410, 440,454, 500, 745, 790........................ 806
Shipping...411, 517, 531, 538, 550, 569, 594............. 611
Superseding.45, 107, 140, 265, 331, 424
Taking flight from the comb.. 618
Two in one hive............ ... 613
Untested.183,184,218, 343, 363,436, 514............................ 520

Wintering Bees—
Absorbents..... 61
Bee House .41, 134, 314, 441, 703, 810
Bees deserting hives........... 61
Best hive for.... ....61, 699
Breeding in winter.... 234
Building a bee cellar......... 741
Burying in cave.11, 309, 375, 376, 699, 709............................ 715
Causes of disaster........... . 164
Cellars...45, 61, 108, 123, 138, 171, 203, 236, 267, 556, 645, 699, 709... 725
Chaff hives 629, 708, 741
Cider for 38
Clover chaff for packing...... 806
D. A. Jones' plan............... 709
Feeding in winter....35, 76, 140, 410, 619 772
Greenhouse for................. 339
How to winter bees............ 682
In England.............. 612
In Texas 44
Is the problem settled?.....71, 391
Lime for.................329, 727, 795
Moving in winter..... ....29, 54
Packed with chaff...13, 107, 122, 124, 156, 314, 426, 659, 684, 709, 732, 786 811
Packed with hay, etc..10, 29, 61, 123
Pollen detrimental .25, 58, 198, 627
Preparation for.30,38, 57, 87, 121, 186, 228, 348, 395, 598, 611, 634,643, 644, 662, 679, 682, 689, 692,707,711, 740, 746. 760, 762.................. 793
Results of the past winter.44, 76, 108, 169, 170, 172, 249, 265, 314, 754
Snow drifts.....................795, 824
Successful ..12, 107, 124, 186, 217, 236, 250, 252, 300, 347, 395........ 659
Summer stands...13, 41, 91, 124, 137, 236, 251. 361
Taking out of winter quarters. 140
Temperature during.76, 153,183, 502
Two-story hive for............ 699
Ventilation.39,45,215,340, 360,380, 795
Water for.....................728, 824
Winter flights...12, 30, 45, 60, 92, 124, 203. 820
Winter passages............. ... 379
Young bees for 124, 643

INDEX TO CORRESPONDENTS FOR 1882.

Abbe, Edward P., 276.
Abbott, A. J., 491.
Abbott, C. N., 467, 474.
Abbott, L. F., 599.
Adams, G. H., 186, 348, 412, 556.
Addition, F. O., 216, 361, 788.
Adkinson, A. J., 651.
Aiken, R. C., 2 .
Albright, Mr., 712.
Alderman & Roberts, 251.
Allen, Grant, 536.
Allen, N. P., 282.
Alley, H., 76, 151, 199, 283, 298, 345, 459, 569, 666, 669, 745, 747, 753.
Allison, Mrs. C. J., 217, 535.
Alves, G. M., 267, 293, 329, 377, 380, 634.
Amiel, Monch, 726.
Anderson, H. W., 587.
Anderson, J., 228, 313, 451, 507, 650.
Anderson, Prof. R. B., 409.
Anderson, W. B., 108.
Andrews, W. H., 107, 662, 730.
Andrews, W. J., 513.
Argo, R. M., 171.
Armstrong, E., 315.
Arp, Bill, 355.
Arthur, T. S., 486.
Ashby, G. W., 13, 186, 247, 281, 292, 332, 442.
Ashland, Mr., 116.
Ashley, Dr., 44.
Ashworth, Rev. J., 280.
Austin, Jas. A., 235.
Axtell, L. C., 138, 236.
Aylor, R. L., 155.

Bacon, R., 88, 457.
Bair, W. S., 635, 762.
Baker, A. L., 44.
Baker, J. R., 156, 437, 466, 548, 667, 732.
Baker, O. P., 236.
Balch, A. C., 363, 791.
Balch, W. H., 247, 676.
Balcomb, Thos., 212, 600, 665, 770.
Baldridge, M. M., 677, 689.
Barber Ira, 88, 298, 635, 725.
Barclay, W. S., 122.
Barnes, Wm., 378.
Barnhill, N. H., 744.
Bartow, Mr., 711.
Bass, Jno. H., 810.
Bassett, J. P., 297.
Bauer, Mr., 441.
Baxter, Jno., 44.
Bayard, J. W., 476.
Beath, Jos., 29.
Beckley, A. D., 675.
Beckwith, W. H., 203.
Beebee, E. B., 788.
Beecham, H. K., 75.
Beekeeper, 170.
Beginner, 522, 617.
Bellairs, E. H., 667.
Bellemey, D. W., 12, 331.
Benedict, A., 218, 376, 459, 485, 581.
Benedict, F. ., 820.
Benham, L. S., 476.
Bennett, R. J., 451.
Benton, F., 69, 242, 546, 657.
Berryman, Wm., 810.
Bertrand, E ., 615.
Besse, H., 29, 427, 458, 581.
Betsinger, N. N., 43, 88, 164.
B. G. C., 154.
Biggers, C. T., 665.
Billing, Peter, 571.
Bills, Bishop, 714.
Bingham, T. F., 29, 89, 92, 137, 267, 314, 791, 802, 810.
Binkley, Marvin M., 633.
Birch, R. M., 312.
Bischoff, G., 824.
Bitzer, Wm., 298.
Bivens, J. J., 132.
Black, R. H., 251.
Blaisdell, W. S., 247.
Blanton, O. M., 201, 249, 380, 460, 538, 634, 662.
Bledsoe, O. F., 135, 314, 501
Bliss, W. W., 405, 691.
Blosser, Amos P., 75.
Blow, T. B., 327, 419.
Boardman, H. R., 570, 697, 711.
Boggs, Geo. E., 618, 699.
Bohl, F. A., 619.
Bolling, Wm., 10, 330.
Bollinger, P., 155.
Bonham, Lynn, 171.
Boone, T. C., 171.
Boss, Jno. H., 617.
Bosworth, W. V., 88.
Bouteiller, F. T., 124.
Bowditch, F. C., 487.
Bower, Jacob, 188.
Bradford, W. A., 443. 5.
Bradish, C. W., 45, 60
Bray & Seacord, 379,
Breed, J. R., 587. , 555.
Brewer, Joel, 236, 380
Buckley, Peter, 370.
Briggs, E. L., 45, 198, 699, 743.
Brigham, Mr., 581.
Brillhart, S. B., 29.
Bristol, S. S., 137.
Brooks, Eli, Jr., 186.
Brooks, Jos. M., 524, 692.
Brothers, M., 523.
Brown, Dr. J. P. H., 52, 292, 347, 466, 666, 693, 806.
Brown, Dr. L. E., 292.
Brown, W. B., 508.
Brown, Zadock, 132.
Bruton, J. T., 379, 412, 524, 684.
Buchanon, J. A., 39, 121, 214.
Buchanon, W. S., 123.
Buck, J. A., 74.
Bucklew, J. A., 313, 598, 824
Bull, T. S., 92, 724.
Buller, E. R., 282.
Buller, H. F., 620, 715.
Burbank, D. S., 571.
Burgess, F. W., 180.
Burnham, H. W., 811.
Burr, Rev. W. K., 385, 535.
Burrell, H. D., 124, 679.
Burrill, A., 61.
Burrill, T. J., 347, 361, 362, 440, 442, 474, 522, 524, 603, 635, 650, 651, 699.
Burrow, J. A., 236.
Burt, C. S., 169.
Bussey, W. H., 347, 675, 762, 773.
Butler, Dr. S. S., 26.
Butman, C., 380, 459.
Byer, David, 13.

Caldwell, J. V., 439, 520, 524, 585, 779.
Caldwell, Mr., 116.
Camm, Wm., 43, 123, 410, 554, 585, 731.
Campbell, E. C., 729.
Carroll, B. F., 30, 315, 372, 454, 490, 491, 651, 707, 745.
Carson, L., 169, 312, 620, 679.
Carswell, J., 45.
Carter, J. W., 124, 810.
Casson, Wm. C., 169, 475, 596.
Cauthen, W. S., 442.
Chace, C. E., 569.
Chalmers, Mr., 644.
Chamberlain, W. I., 595.
Chantry, Thos., 154, 375.
Chapman, J., 251.
Cheney, F. M., 379, 508.
Cheshire, F. B., 358, 484.
Cholwell, G., 427.
Christie, Jno. H., 75, 635.
Church, G. W., 810.
Churchill, E. P., 740.
Clark, C. M., 186, 824.
Clark, H., 30, 169, 588, 810.
Clark, W. E., 84, 203.
Clarke, C. A., 296.
Clarke, W. F., 7, 23, 58, 70, 134, 150, 276, 313, 374, 405, 425, 469, 503, 531, 593, 597, 641, 657.
Clary, W. T., 451, 459, 482, 538, 603.
Clements, B. L., 506, 619.
Clendenon, Ben, 571.
Cleveland, H. W., 203.
Clouse, Elias, 466, 532.
Clute, O., 4, 260, 472, 587.
Cobb, T. M., 346, 360.
Cochrane, L. M., 380.
Codding, O. P., 54.
Coggshall, W. L., 540.
Cole, Geo., 61.
Coleman, Wm., Jr., 44, 410.
Collier, P. P., 396, 571.
Collins, H. T., 133.
Collins, F. F., 657.
Conger, A. L., 292, 363.
Conklin, H. W., 187.
Connelly, Chas., 312.
Connelly, Jno. T., 71, 568.
Cook, H. M., 196.
Cook, J. H. B., 75, 348.
Cook, Prof. A. J., 25, 84, 88, 267, 280, 306, 321, 331, 341, 379, 392, 401, 406, 427, 444, 474, 490, 499, 521, 561, 595, 602, 614, 620, 626, 632, 646, 682, 722, 791.
Cooley, O. E., 3 6.
Cooley, Z. G., 508.
Coombes, E. M., 107.
Corbett, R., 215, 236, 371, 396, 746.
Corbit, Jas., 666.
Corey, Mr., 458, 818.
Cornell, S., 517, 64 , 697, 728, 823.
Corscott, Job , 61, 313.
Cotton, I. A. .06.
Couse, H., 7.2.
Covey, F. S., 360.
Cowgan, T. W., 37.
Craig, J. R., 202.
Crane, E. C., 810.
Crawford, Jno., 570.
Craycraft, John, 13.
Cripe, Henry, 444.
Crowfoot, I. S., 427.
Culbertson, Prof., 116.
Cullen, Francis, 92.
Cullimore, Jas., 312.
Cutting, H. D., 792.

Dadant, Chas., 22, 105, 107, 164, 588.
Dahl Peter, 676.
Damkohler, G., 746.
Daniel Bros., 379.
Daniel, Jas. A., 371.
Darby, A. D., 506.
Darling, J. B., 712.
Dathe, G., 373.
Davis, H. C., 247.
Davis, Jno. L., 795.
Davis, W. J., 83, 86, 212.
Deane, C. H., 245, 250, 443, 565, 569.
DeCew, E., 729.
DeLair, Edmund, 138, 217.
Demaree, G. W., 70, 140, 166, 219, 246, 292, 296, 326, 344, 357, 407, 437, 466, 472, 476, 519, 533, 628, 775.
Denman, G. H., 155.
Densmore, L., 122, 172.
Derby, Otto S., 60.
Detwiler, J. Y., 186, 524.
Dibbern, C. H., 368, 396, 482, 708, 714.
Dickinson, B., 331.
Dickinson, Mr., 88.
Dickson Bros., 476.
Diebl, L. J., 124, 251, 524.
Dierdorff, D. M., 745.
Dodge, H. E., 61, 155, 219.
Dodge, W. M. S., 346, 360.
Doolittle, G. M., 6, 44, 76, 83, 100, 133, 140, 151, 198, 229, 260, 266, 283, 296, 308, 314, 348, 358, 372, 395, 424, 454, 460, 508, 523, 540, 548, 565, 598, 667, 696, 708, 725, 741, 757, 774, 788, 819, 820.
Doty, E., 108, 555, 571, 810.
Dougherty, F. L., 148, 408.
Douglass, J. K., 516.
Downs, R., 619, 635.
Drake, C. M., 387.
Drane, E., 292.
Dresser, F. L., 587.
Drevar, A., 61.
Drew, Geo., 811.
Dunbar, G. W., 298.
Duncan, J. S., 29, 208.
Dunham, W. W., 723
Dunn, Jno., 315, 410, 522, 661, 714.
Dupee, Geo. E., 35.
Dzierzon, Dr., 60, 153, 424, 438, 502, 566.

E, 523.
Eastlake, Jesse, 28.
Eastman, H. L., 172.
Eastman, W. W., 298, 566.
Eastwood, L., 824.
Eaton, Frank A., 587.
Eby, J. H., 171, 667.
Eckman, J. W., 202, 570.
Edwards, H. D., 540.
Edwards, J. L., 113.
Egan, Wm., 312.
E. L. B., 72.
Ellicott, T., 347, 779.
Ellis, J. F., 74.
Emerick, Lee, 10.
Emmerson, N., 172, 266,
Enos, J. D., 29, 171, 283, 362, 522.
England, P. J., 651.
Erwin, Jas., 267, 570, 602.
Estlack, Jesse C., 513.
Etherington, A. L., 29, 300, 467.
Everett, T. A. C., 824.
Ewing, E. E., 331.

Fairchild, Mrs., 387.
Fancher, J. A. P., 316, 379,
Farley, Dr., 707.
Farwell, H. C., 72.
Felswann, Johann, 613.
Felton, E. W., 522.
Ferstel, John, 667.
Fife, Jas. T., 43.
Filley, Henry, 185.
Finch, F. H., 379, 568, 571.
Fish, A. E., 108.
Fish, Herbert H., 603.
Fish, Mr., 711.
Fisher, P., 235, 282.
Fisk, A., W., 411, 587.
Flanagan, E. T., 53, 120, 604, 661, 795.
Fletcher, A. P., 40, 295, 539, 570, 763.
Flick, H. H., 306, 314.
Flory, J. S., 585.
Flourney, O. R., 778.
Follett, Chas., 538, 586.
Foote, J. M., 587.
Foote, W. D., 476.
Forfar, Thos., 643.
Forncrook, Jas., 56, 679.
Foster, A. E., 666.
Fox, Jno., 75.
Francis, W. H., 666.
Fredenberg, E. L., 603.
Frederick, S. C., 252, 379, 524, 556, 821
Freeman, W. E., 266.
French, L., 426, 760, 807.
Fry, Jno. F., 186, 811.
Funk, F., 353.
Funk, H. W., 156, 676.

Gammon, R., 172.
Gander, Alfred, 443.
Gardiner, Jas., 634.
Garlick, Geo., 170.
Garrett, H. W., 481, 514.
Garrett, M. A., 375.
Gast, G. L., 676.
Gatter, Karl, 816.
George, Jonathan, 236.
G. H. D., 106.
Gibson, F. A., 236, 315.
Gilbert, J. W., 602.
Gillette, W. C., 235.
Glennon, Wm., 587.
Good, I. R., 108, 200.
Goodner, T. C., 730.
Goodno, O. R., 490, 571.
Goodnoe, N. V., 107.
Goodrich, S., 129, 252.
Goodwin, Geo. H., 332.
Gorum, G. W., 824.
Gravenhorst, C. J. H., 59.
Graves, C. A., 12, 604.
Graves, F. F., 556.
Graves, W. H., 348, 442, 714.
Gray, J. L., 676, 822.
Gray, J. T., 248.
Green, John H., 508.
Green, J. W., 554.
Greer, I. N., 247.
Greiner Bros., 571.
Grimes, D. S., 27, 458.
Grimm, C., 600, 662, 695.
Grimm, Geo., 68.
Grout, W. H. S., 202, 491, 539, 586.
Grove, F. A., 45.

H., 396.
Hackman, H. S., 71, 124, 184, 210, 570, 604, 665, 755.
Hadaway, Miles, 394.
Hadley, E. P., 172.
Hahman, F. Jr., 315.
Haight, C. J., 92.
Hail Columbia, 68.
Halley, L. G., 114.
Hambly, J., 265, 283.
Hance, H., 283.
Hancock, W. P., 138, 219.
Hanneman, F. A., 483.
Hanson, S., 696.
Harbison, J. S., 776.
Hardin, H. S., 460.
Harmer, Walter, 107.
Harrington, H. B., 662.
Harrison, Mrs. L., 57, 115, 131, 259, 567, 570, 677, 692, 707, 754, 758.
Hart, W. S., 9, 179, 356, 451, 506, 519, 610.
Hartman, H. T., 665, 824.
Hartman, Lizzie, 186.
Hartman, Wm., 522.
Hasbrouck, Prof., 5, 196.
Hassler, J. H., 217.
Hasty, E. E., 131, 804.
Hatch, C. A., 181, 538.
Hatfield, A. J., 540, 601.
Hauck, C., 123.
Havens, Reuben, 122.
Head, J. S., 556.
Heckman, H. G., 155.
Heddon, Jas., 8, 21, 35, 38, 55, 71, 85, 105, 118, 152, 170, 201, 204, 218, 235, 278, 299, 308, 343, 374, 391, 437, 443, 456, 465, 471, 485, 490, 501, 507, 513, 514, 517, 533, 539, 549, 566, 577, 593, 657, 659, 675, 773, 791.
Henderson, W. P., 72.
Henning, Herr, 759.
Hibbard, Geo., 124.
Hibbard, Henry, 481.
Hicks, J. M., 115, 227, 259, 563, 584, 664, 690.
Hicks, Samuel, 249.
Higbee, D., 661.
Hilbert, Herr, 60, 310.
Hilton, G. E., 12, 555, 699.
Hinsdale, J. W., 362.
Hinman, S., 411.
Hinshaw, E., 92.
Hisgen, C. H., 699.
Hix, B., 172.
Hodges, A., 45.
Hohenshell, W. T., 540.
Hoke, Abe, 75, 731.
Holcomb, A. H., 555.
Holley, S. G., 714.
Holman, N. H., 247.
Holmes, R. E., 41, 218.
Holterman, R. F., 297, 523, 649, 666.
Hoopes, Josiah, 296.
Hopkins, D. H., 264.
Hopkins, S. J., 13, 458.
Houck, T., 132.
House, G. W., 21, 84, 88, 699.
Howard, W. N., 60, 618.
Howard, W. R., 44, 120, 170, 181, 267, 277, 314, 730, 732.
Howells, W. D., 45.
Hoyt, C. H., 712.
Hoyt, Wm., 361, 760.
Huck F., 727.
Hulman, T., 266, 280, 298.
Hunt, A., 60.
Hunter, J. E., 677.
Hutchins, Isaac, 314.
Hutchinson, E., 29.
Hutchinson, J. D., 114, 348, 545, 553, 779.
Hutchinson, W. Z., 4, 19, 57, 148, 149, 183, 231, 264, 279, 291, 309, 376, 405, 423, 470, 490, 520, 524, 531, 538, 550, 793.
H. Z. S., 30.

Innis, A. C., 11.
Irving, Rev. J., 131.
Isham, C. R., 65, 120.

Jackson, F. R., 4.
Jackson, L. R., 9, 33, 299, 307.
Jackson, S. T., 475.
James L., 309, 329, 811.
J. E., 121.
Jeffrey, H. L., 22, 426, 602, 619, 689, 694.
Jeker J., 616.
Jenney Wm., 538.
J. H. B., 579.
J. M. B., 299.
Johnson, F. M., 408, 715.
Johnson, J. F., 619.
Johnson, Jos. E., 312.
Johnson, L., 12, 135, 181.
Jonas, H., 348, 818.
Jones, D. A., 103, 564, 643, 646, 663, 689, 709, 761.
Jones, G. B., 218, 298.
Jones, Henry, 91, 226.
Jones, J. M., 435.
Jordan, E. C., 315, 323, 378, 596.
Jordan, Q. C., 136.
Juergens, F., 571.

Kalley, D. S., 249, 666.
Karn, S. S., 588.
Kazartee, Mr., 791.
Keeler, G. W., 667.
Keene, R. W., 347, 786,
Keeney, V. M., 678.
Kellogg, Dr. J. H., 21.
Kellogg, W. M., 99, 162, 532.
Kelton, D. H., 435.
Kemp, Geo., 586, 715.
Kemp, W. C. R., 172, 300.
Kennedy, J. H., 45.
Kerchival, A. F., 343.
Kerr, J. S., 92.
Ketcham, D. M., 266.
Keyes, D. R., 267.
Kight, J. F., 76, 187, 218, 250, 265.
Kilburn, R. E., 346, 360.
Kime, George, 412.
King, A. J., 88, 106, 196.
Kingsley, Mrs. C. M., 281.
Kinney, F. G., 443.
Kinney, Martin, 30.
Kinsel, T. F., 540.
Kizer, J. J., 567.
Kleinow, Otto, 663.
Kloer, T. H., 476.
Knapp, S. A., 417.
Knirihm, Herman, 265.
Knoll, D. K., 571.
Knorr, L., 12, 454,
Knowles, J. M., 140.
Koch, Dr. I. W., 570.
Kohnke, A. R., 8, 41, 56, 59, 72, 92, 104, 115, 135, 262, 294, 682, 698.

Krainik, John, 746.
Kroeb, C. F., 196, 230, 311, 347.
Kruegell, Mr., 452.
Kuhl, Dr. Fred, 440.

Ludd, Lynn B., 283.
Lake, C. H., 683, 722, 790.
Langstroth, Rev. L. L., 500.
Lantz, L. Z., 219.
Large Henry, 795.
Lashbrook, Thos., 380, 555.
Luy, J. E., 300, 325, 453, 662.
Lee, Fayette, 139.
Lee, H. W., 596.
Lee, Joseph, 29, 539, 604, 715.
Lee, K. J., 361.
Lee, T. W., 312, 713.
Leidy, M., 746.
Leonard, Thos. D., 310.
Levering, N., 27.
Lewis, E. M., 10.
Lewis, G. B., 161.
Lewis, M. H., 824.
Lilley, Samuel M., 60.
Lindsley, L., 476.
Lingle, B. M., 35.
Littell, H. H., 124.
Livingston, W. T., 249.
L. K., 395.
Lloyd, E. N., 443.
Locke, S. W., 89.
Lord, Jas. S., 170, 236.
Lossing, Wm., 236, 409.
Loucks, P., 620.
Lovejoy, R. P., 378.
Lowmaster, L. A., 313.
Lubbock, Sir John, 738.
Luff, Geo., 714.
Luther, Herbert, 715.

McAllister, J. S., 443, 602.
McBroom, John, 28.
McCall, Jos. M., 453, 494.
McCallum, D. S., 427.
McCordan, W., 361.
McCormick, W. B., 13, 395.
McCoy, Frank, 156.
MacDonald, R., 490, 586, 715.
MacDonnell, S., 102, 168, 660.
McElhany, H. O., 571, 650.
McFutridge, L. C., 124, 187.
McGaw, T. G., 699.
McKay, Samuel, 713.
McKinney, K. J., 361.
McKinstry, J., 619.
McKnight, A., 123, 476, 618.
McKnight, R., 643.
McKown, C. W., 124, 550.
McLavy, A. B., 76, 649.
McLean, S. D., 123, 266.
McLees, S., 282, 620.
McLendon, W. G., 219, 426, 732.
McMillan, J., 234.
McNeill, Jas., 123, 588.
McQueen, F. B., 44.
McRay, C. E., 61.

Mace, T. C., 73.
Mackey, G. H., 140.
Mackey Samuel, 312.
Madson, Bishop, 312, 714.
Maher, Prof. T., 610, 649.
Mahin, Rev. M., 10, 182, 742.
Mallory, E. D., 376.
Mallory, W. H., 92.
Malone, Wm., 395, 507, 569, 633, 699.
Manum, A. E., 570.
Margrave, J. W., 186, 226.
Markham, W. D., 377.
Markle, Mr., 409.
Marquis, T. N., 634.
Marsh, D. D., 44, 76.
Marsh, D. J., 194.
Marsh, F. E. L., 27.
Marshall, S., 747.
Marshall, W. K., 186, 393, 395, 730.
Martin, J. H., 148, 166, 184, 245, 263, 279, 491, 521.
Martin, Thos., 601.
Martin, W. H., 235, 427.
Martin, J. C., 459.
Marvin, J. M., 676.
Mason, Dr. A. B., 37, 217, 503, 531, 538, 568, 808.
Mason, Jas. B., 161.
Mason, M. E., 44.
Mason, W. J., 292.
Massey, E. P., 171, 380, 568.
Maxwell, Wm., 362, 402.
Mead, C. E., 823.
Mead, R. L., 699.
Merrifield, J. W., 91.
Merritt, L. H., 795.
Michigan Breeder, 235.
Miller, Dr. C. C., 119, 227, 265, 631, 650, 663, 667, 675, 706, 791.
Miller, J. M. A., 13.
Miller, S. F., 114.
Miller, W. H., 267.
Millett, D. C., 170.
Mills, Z. Jr., 243, 280.
Milster, M. H., 61.
Miner, F. M., 178.
Minnick, F., 715.
Mishler, J. C., 30, 490.
Mitchell, C., 188, 746.
Mitchell, C. R., 710.
Mitchell, J. B., 580.
Mitchell, R. H. C., 139, 283.
Mobberly, L. T., 137, 280, 380.
Moerlein, P., 156.
Mohr, D. & M., 380.
Mollyneaux, R. A., 443.
Montague, C. A., 442.
Montrevil, A., 12.
Moon, A. F., 124, 185, 439, 499.
Moore, E., 348, 354, 522, 582.
Moore, J. E., 536.
Moore, J. P., 435, 487, 551.
Moore, W. W., 684.
Morgan, E. A., 298, 348.
Morris, E. H., 171.
Morris, H. M., 618.
Morris, John, 523, 524.
Morse, W., 810.
Morton, Dr. J. A., 460, 695, 775.
Moss, S. H., 652, 762.
Moyer, H. M., 699.
Muehl, T., 362.
Muir, John, 488, 582.
Musser, A. M., 312, 714.
Musser, R. S., 501, 695.
Muth, C. F., 101, 106, 150, 163, 187, 348, 579, 646, 665, 808.

Nagle, C. H., 13.
Naftzger, G. W., 217.
Nebel, John, 249, 811.
Neighbour, A., 275, 355.
Nelson, Jas. A., 147.
Nelson, P. P., 11, 411, 427, 476.
Newbro, S. D., 632.
Newcomb, E., 458.
Newman, J. C., 679.
Newman, S. F. 635, 711.
Newman, T. G., 84, 675, 680, 791, 808.
Newsom, C. S., 556.
Newton, Mr., 581.
Nichols, J. R., 322.
Noble, H. M., 395.
Northrup, H. J., 235, 556, 602, 634.
Norris, A. J., 519.
Norris, Dr. J. W., 481.
Norton, D. P., 186, 377, 618, 666.
Notlee, E., 168.
Novice, 602.
Nutt, W. C., 363.

Oatman, E. J., 676.
Offinger, F., 187.
Oldham, J. C., 329, 795.
Oldt, R. B., 571.
Olefogy, 633.
O'Rear, Dr. J. H., 680.
Ormsby, V. R., 459, 586.
Orvis, Ira, 556.
Osborne, R. M., 203, 250, 331, 475, 569, 715.
Osburn, A. W., 251.

Padgett, G. W., 123.
Page, 378.
Palmatier, P., 132.
Pammel, G. J., 43, 409, 412.
Pammel, L. H., 5, 537.
Parker, C. H., 170.
Parker, D. G., 666.
Parmly, Dr. E., 291, 449.
Parr, W. P., 680.
Paxton, W., 246, 473, 744.
Peabody, J. L., 28.
Pearson, Col., 353.
Pearson, W. A., 187.
Peck, B. W., 666.
Peden, J. L., 76, 122, 364, 426, 507, 663.
Pelon, M., 169.
Pettigrew, A., 21, 339, 407, 418, 433, 453, 468, 483, 600, 819.
Pettit, S. T., 359.
Phares, G. N., 76.
Phelps, W. G., 71.
Pickup, E., 30, 811.
Pierce, H. A., 824.
Pierce, Thos., 13.
Pierson, W. S., 811.
Pigg, J. W., 570.
Pike, D. A., 137, 186, 251, 280, 411.
Pleasants, J. E., 154, 267, 387, 705, 711.
Plopper, R. S., 566.
Plummer, I. F., 760.
Pond, J. E., Jr., 630, 726.
Pontius, W. G., 186.
Poppleton, O. O., 249, 261, 293, 411, 476, 554, 629, 662, 675, 693.
Porter, Gov. A. G., 105.
Porter, J. W., 101.
Porter, N. T., 312.
Porter, W. G., 186.
Powell, J. F., 267.
Powell, Mr., 581.
Prall, T., 35, 170, 217.
Pratt, Mr., 76.
Pray, G. L., 746, 806.
Preston, W. C., 102, 706.
Price, Jno., 312.
Prudden, N. A., 5.
Pryal, W. A., 612.
Purvis, L. G., 778.
Putnam, H. F., 795.

Quackenbush, C., 132.
Quimby, D. W., 801.
Quinlan, Thos. B., 540.
Quiz, 554.

Rafftery, W. H., 13, 61.
Rainbow, J. P. M., 614.
Rainey, W. S., 540.
Ranney, O. B., 792.
Rassmussen, W. Muth, 261, 601, 603.
Read, J. H., 292, 745.
Rearden, Phil, 476, 507, 530, 602, 651.
Reed, S. G., 571.
Reigel, P. A., 265.
Reigel, S. D., 581.
Reisser, Dr., 504.
Reynolds, A., 123.
Reynolds, Alvah, 124.
Riatt, Wm., 243.
Rice, A. A., 679.
Rice, David, 170.
Richards, H. M., 28.
Richards, Silas, 312.
Richardson, M., 215.
Richey, H., 29.
Rickenbacker, A., 540.
Ridenour, J. G., 762.
Rife, F. B., 300, 426, 459.
Ripley, F. L., 808.
Robbins, Mrs. C., 216.
Robbins, Prof. S. J., 140, 661.
Roberts, Wm., 124, 186, 236, 507, 601, 635, 699, 762.
Robertson, J. H., 264, 346, 792.
Robertson, T. T., 597.
Robinson, J. J., 346.
Roe, Frank R., 571.
Roebuck, J. R., 236.
Rogers, Dr. W. M., 712, 820.
Ronian, Jas., 377, 795.
Root, A. I., 663, 777, 791.
Root, E. R., 516, 598.
Root, L. C., 88, 116, 315.
Roper, F. E., 556.
Rosebrough, D. R., 715, 809.
Ross, J. W., 251.
Rossiter, M., 187.
Rouse, G., 116, 763.
Rowland, N. H., 603.
Roys, T. S., 188, 233.
Rue, C. H., 12, 313.
Rudd, J., 762.
Russell, A. J., 13.
Rusticus, 491.
Rutherford, Mr., 644.
Ryan, J. M., 348.
Rykert, A. G., 13.

Sabins, Wm., 811.
Salisbury, A., 104, 184, 380.
Sample, J. E., 185.
Sanders, J. W., 197, 603.
Sanders, Mrs. A. M., 12, 313, 388, 427.
Sanderson, S., 60, 347.
Saunders, J., 618, 665.
Sawin, F. J., 361.
Sawyer, O. L., 794.
Schmudaka, H., 249.
Schofield, I. L., 227.
Schofield, O. B., 30, 61.
Scudder, L. H., 676, 684.
Searle, F., 108.
Sears, F. H., 763.
Sears, Wm., 332.
Secor, E., 363, 473, 518, 534, 613, 650.
See, H. S., 588.
Sellers, J. F., 763.
Sharp, Isaac 13., 265, 476.
Shaver, Dr., 643.
Shaw, J. W. K., 42, 265, 314.
Shearman, J. O., 634.
Sherer, M., 652.
Sherfy, R., 163.
Sherman, T., 505.
Shepherd, T. H., 652.
Sherrets, John, 91, 444.
Shoemaker, R. L., 290, 449.
Shriver, S. H., 684.
Shuck, J. M., 343, 410, 524.
Shuck, S. A., 167, 316, 444, 508, 652, 742, 789, 821.
Shultz, Dr. J. H., 677.
Silliman, Prof. B., 515.
Simmins, S., 612, 789.
Simmons, J. B., 250.
Simons, M., 267.
Skinner, J. B., 182.
Slabbekorn, J., 360
Slack, C. M., 219.
Slade, Dr. S. M., 276.
Small, W. A., 587.
Smith, A. W., 154.
Smith, B. Z., 266.
Smith, E. F., 441,
Smith, H., 203.
Smith, H. J., 108, 300, 778.
Smith, J. L., 534.
Smith, J. T., 74.
Smith, S. C., 30, 570.
Smith, S. J., 172.
Smyser, W. D., 204, 711, 795.
Snell, F. A., 45, 459, 809.
Snow, M. S., 348.
Snyder, M. H., 330.
Sonnemann, C., 249, 300, 377
Sonnemann, G. E., 615.
Southard, Dr. W. B., 793.
Southwick, E. B., 91, 122, 152, 172, 188, 475, 508, 620, 741, 762, 791, 808.
Spangenberg, C., 409.
Spear, D., 581.
Spence, J., 178, 183.
Spence, W. B., 280, 588.
Stahala, J., 388.
Stalhammer, T. G., 262.
Stanley, G. W., 182, 244, 491.
Stark, G. W., 45.
Steacy, W. H., 282.
Steer, J. G., 518, 603.
Steere, Prof. G. B., 5.
Stevens, M. C., 338, 614.
Stevenson, Dr. S., 676.
Stevenson, E., 312, 713.
Stewart, J., 76, 330.
Stewart, W. T., 39, 292, 427, 660.
St. John, Mr., 792.
Stocking, A. D., 119, 140, 569.
Stocking, Mrs. C. L., 680.
Stolley, Wm., 12, 187.
Stonehouse, M., 188.
Stout, W. H., 13, 154, 571, 705.
Strathearn, Mr., 458.
Strong, J. L., 411, 586, 634.
Sturgill, W. T., 203, 556.
Sturwald, J. W., 108, 265, 443, 508.
Subscriber, 138, 147, 219, 235, 267, 281, 332, 491, 556, 715.
Swarthout, J. J., 793.

Tadlock, J. S., 155, 281, 444, 811.
Taylor, E. F., 44.
Taylor, R. L., 793.
Taylor, W. P., 619.
T. C. G., 342.
Tennant, W. L., 132.
Terrell, O. J., 664, 711, 755.
The Agent, 524.
Thielmann, C., 247, 805, 811.
Thiaville, F., 506, 667.
Thom, Dr. J. C., 203, 444.
Thomas, E. A., 54, 100, 108, 118, 232, 341, 460, 538.
Thomas, E. M., 773.
Thomas, Jerry, 443.
Thomas, Mrs., 116.
Thomas, T. D., 60.
Thomas, W. & Son, 225.
Thompson, Geo., 212, 531, 675.
Thompson, G. W., 196.
Thompson, W. R., 44, 297, 615
Thomson, M., 598.
Thurston, E. H., 642, 759.
Tilley, H., 491, 540, 620.
Tinker, Dr. G. L., 30, 53, 169, 201, 517, 567, 652, 674.
Tite, C., 290.
T. K., 281.
Todd, A., 455, 549, 583, 604, 804.
Todd, J. O., 665, 690.
Tomlinson, J., 104, 642, 793.
Tompkins, Mr., 196.
Torre F. Della, 727.
Touchton R., 458.
Townley, J. H., 41.
Townsend, F. E., 13.
Townsend, O. H., 263, 297, 441, 793.
Trench, C. R., 643.
Trester, M. L., 10, 30, 363, 675.
Tucker, J. M., 579.
Turner, T. E., 12, 123.
Twitchell, P. F., 12.

Utz, S., 139.

Valentine, J. M., 678.
Valentine, S., 117.
Vandevort, J., 507, 662.
VanDeusen, J., 90.
VanDeusen, R., 490.
VanKirk, L. W., 73, 167, 171.
Varnauf, F., 252.
Viallon, P. L., 379, 444, 627, 673.
Vinson, W. M., 695.
Vogel, Prof. A., 59, 683.
VonDorn, T. L., 29, 116, 169, 457, 732.
Vredenburgh, J. L., 634.
Vrooman, S., 88, 132, 331.

Wainwright, L. M., 155.
Wait, O. C., 37.
Wakefield, Wm., 60, 633.
Walcott, Mrs. J., 360.
Waldron, C. P., 203.
Waldron, E. F., 711.
Wales, E. W., 443.
Walker, Byron, 136.
Walker, Mr., 712.
Wallace, H., 374, 387.
Wallace, J. G. A., 795.
Wallbridge, Hon. L., 68, 423, 643.
Walsworth, S., 250.
Walton, Col. R., 330, 620.
Ward, H. J., 330, 568.
Ward, T. J., 491.
Ward, W. S., 187.
Waters, M. S., 539.
Watson, J. Jr., 331.
W. B., 699.
Weaver, O. N., 155, 410.
Webster, A., 203.
Webster, D. G., 76.
Weed, A. B., 264, 291.
Weeks, E., 250.
Welch, L. E., 331.
Wells, Wm., 538.
Wells, W. C., 491, 643.
Wemple, L. C., 678.
Wemyss, W. P., 218.
West, Mrs. A. J., 657.
West, M. D., 152.
Weston, W. H., 651, 763.
Wheeler, Geo. T., 507.
Wheeler, M., 29.
White, J. W., 7.
Whitfield, W. J., 214.
Whitford, Leroy, 450, 460
Whiting, L. C., 44, 378.
Whitlow, H. C., 540, 603.
Whitmer, D., 555, 603, 675.
Whipps, Wm., 824.
Wicherts, A., 203, 763.
Wilber, A. A., 123.
Wilder, F. N., 235, 411.
Wiley, H. W., 370.
Wilkins, R., 144, 458.
Willard, W. J., 92, 267.
Williams, A. T., 131, 330.
Williams, F. S., 35.
Williams, George, 13.
Williams, H., 810.
Williams, H. M., 185, 315.
Williams, M. A., 757.
Williams, R. P., 108.
Williamson, J. A., 41, 588, 679.
Williamson, W., 11, 385.
Willitts, O. W., 756.
Wilson, C. N., 456.
Wilson, G. A., 730.
Wilson, I. P., 124, 434.
Wilson, J. C., 442.
Wilson, J. T., 107.
Wilson, Thos., 666.
Winder, J. W., 49, 92, 107, 481.
Wismer, J. M., 491.
Wolcott, J. L., 76.
Wolf, L. B., 313.
Wolfender, J. L., 123.
Wolfer, M. H., 732.
Wood, E. N., 280, 632.
Wood, Jos., 484.
Wood, S. H., 170, 824.
Woodberry, A. C., 312.
Woodman, N. M., 507, 555.
Woodward, Mr., 643.
Woolworth, S. T., 74, 441, 475
W. P. T., 251.
Wright, F. L., 310.
Wright, W. D., 132, 242.
W. S., 169.
Wyckoff, S. M., 40
Wynager, Mr., 248

Yager, Ira, 707.
Yoder, A. F., 61.
Yoder, G. J., 171.
Yoder, John, 156, 538.
Young, C. W., 588.
Youngman, S. J., 699.
Younkin, L. D., 658.

Zabel, E., 267, 667.
Zinck, T., 359.
Zwilling, Mr., 441.

INDEX TO ILLUSTRATIONS.

Apiary of Bianchi, in Italy........ 211
Bacconia Japonica........ 249
Barnhill Frame Holder........ 744
Benton's Apiary in Cyprus........ 69
Bees' Tongue Register........ 263
Blister Beetle........ 614
Broad Frame of half-pound Sections........ 802
Building, for Bee Shows........ 324
Case of one-pound Sections........ 68
Climax Hive and Sections........ 258
Comb Foundation........ 746
Conklin's Hive and Sections........ 258
Deane's Section Case........ 245
English Bee Tent........ 325
Evaporator for Honey Tank........ 405
Farmers' Friend Hive and Sections........ 258
Golden Willow........ 758
Goodrich Foundation Fastener........ 129
Heddon's Surplus Arrangement........ 659
Honey Evaporator........ 405
Honey Locust Tree........ 296
Iron Broad Frame for Sections........ 245
Joints of Deane's Case........ 245
Manum's Section Gluer........ 130
Modern Section Case........ 258
Nailed Section, Glassed........ 258
Position of Hives in Cellar........ 709
Pod and Seed of Honey Locust........ 296
Price's Hive and Sections........ 258
Railroad Apiary........ 75
Reversible Frame Holder........ 180
Reynolds & Brooks' Hive........ 258
Scotch Heather........ 3
Screen for Bees at Fairs........ 325
Searching for Apis dorsata........ 692
Slatted Honey Board........ 156
Sweet Clover........ 562
Triangular Frame for Foundation........ 114
Winter Hives packed in chaff........ 659

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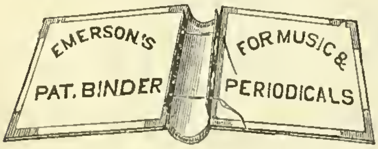

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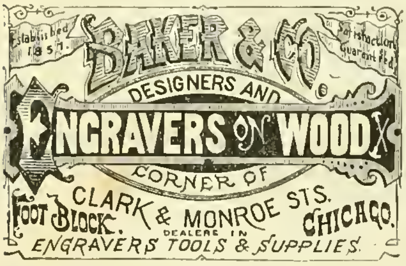
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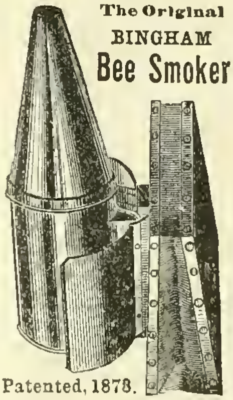

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